



EVALUATION OF TRANSIT SERVICE OPTIONS FOR THE US ROUTE 1/301 CORRIDOR IN CHESTERFIELD COUNTY

July 2, 2018

Prepared for: Chesterfield County Department of Transportation

Study Background

In 2017, Chesterfield County worked with the Virginia Department of Rail and Public Transportation (DRPT) to identify corridors of interest in the county and develop objectives for the evaluation of transportation service alternatives. DRPT provided spatial and quantitative analysis of multiple corridors, looking at high level demographic, traffic, and job-related data and submitted that information to Chesterfield County. Decisions were made by Chesterfield County on the specific goals and elements of the evaluation and the US Route 1/301 Corridor was ultimately chosen by the county for further analysis.

On behalf of Chesterfield County, Kimley-Horn and Associates (KHA) was tasked with evaluating transportation service options for the US Route 1/301 corridor. The objective of the evaluation was to examine a comprehensive range of service options and provide information on service characteristics and anticipated costs and benefits for up to three service scenarios. The limits of the corridor extended approximately 7.5 miles from the Chesterfield County/City of Richmond boundary to Iron Bridge Road (VA Route 10). Attachment A includes a map showing the limits of the corridor and a profile of the corridor.

In addition to this study, the Northern Jefferson Davis Special Area Plan was being developed at the same time this study was underway and was approved by the Chesterfield County Board of Supervisors on April 25, 2018. The Plan acknowledges this evaluation as an on-going effort but also lists transit related possibilities such as: sidewalks, bikeways, right-of-way for transit accommodations (bus stop locations, shelters, benches, etc.), microtransit or demand responsive services, enhanced local service along Jefferson Davis Highway (as described further in the Greater RVA Transit Vision Plan), implementation of a replica trolley system (bus) and development of a park and ride lot near Jefferson Davis Highway at Chippenham Parkway.

KHA reviewed and considered as part of its evaluation the findings of the Special Area Plan, Greater RVA Transit Vision Plan, GRTC Draft Transit Development Plan, VDOT Park and Ride Investment Strategy (2014), Chesterfield County Comprehensive Plan and other associated documents.

Evaluation of Mobility Options

To evaluate mobility options in the US Route 1/301 corridor, KHA began by identifying and evaluating a range of public and private service options. Identified service providers were contacted and asked to participate in an interview to provide input on the viability of implementing services for Chesterfield County in the US Route 1/301 corridor. The following table summarizes the identified service providers and whether or not the service provider agreed to participate in an interview.

Mobility Solution	Service Provider	Interview?
Public Transit Provider	Greater Richmond Transit Company (GRTC)	Yes
	Virginia Regional Transit (VRT)	Yes
	Bay Transit	Yes
Private Transit Provider	GoToWork	Yes
	Groome Transportation*	No
Private Microtransit Provider	Via	Yes
	Uber*	No
	Lyft*	No
	UZURV	Yes
Transportation Demand Management	RideFinders	Yes

Note: Groome Transportation notified Kimley-Horn that it was not interested in providing services in the US Route 1/301 corridor. Uber and Lyft did not respond to multiple requests for an interview.

Interviews conducted with the identified service providers covered the following topics:

- **Corridor Service Types** – Services that would be effective in the corridor based on the primary trip purposes in the corridor and the community’s current mobility issues
- **Corridor Facilities** – Physical improvements that could help optimize multimodal travel in the corridor and physical constraints to providing service in the corridor
- **Technology** – Technology applications that could be effective in this corridor
- **Costs and Fare Collection** – Capital costs, operating costs, anticipated fares, and fare collection methodology
- **Organizational and Technical Capacity** – Existing capacity of the service provider and any additional capacity needed to manage and operate service in Chesterfield
- **Funding Opportunities** – Federal, state, or private funding contributions that may help to fund/finance capital, operating, and maintenance costs for the service
- **Barriers to Delivery** – Challenges that may delay, limit or prevent service delivery
- **Liability** – Concerns for the service provider and potential mitigation strategies

Information collected from service providers during the interviews was compiled into a matrix. The service provider matrix is included as Attachment B to this memorandum. A description of each provider and key takeaways from the interviews are provided below. The information service providers were willing to share varied by provider and some providers were hesitant to share details related to the anticipated costs of service citing the need for more detailed information from the County on the expected days, hours and frequency of services to be provided; and ability to protect proprietary cost data from competitors outside of an official procurement process.

Greater Richmond Transit Company (GRTC)

GRTC provides transportation services in the City of Richmond and parts of Chesterfield and Henrico Counties. Their services include fixed and express route bus service, and specialized service for individuals with disabilities and Virginia Initiative for Employment not Welfare (VIEW) participants. RideFinders, a division of GRTC, also offers a variety of programs in the region that are discussed later in this report.

GRTC recommended a fixed route service that would extend the existing GRTC Route 3B on US Route 1/301 into Chesterfield County. GRTC service would require the use of 30-foot or 40-foot buses, with no significant difference in the service cost for these two bus size options. The primary benefits of the GRTC service option include convenient access to the GRTC bus service network and facilities, and allowing riders to enjoy a one seat ride using one form of fare media across County/City boundaries. GRTC also stated they could implement service quickly, would use their existing fleet to limit capital expenses and would leverage existing operating resources such as supervisors, customer service staff and administrative staff. If the service did not meet Chesterfield County's goals, GRTC stated it could reduce or eliminate the service within a short time period of receiving notice thereby reducing the County's risk of having to enter into a long-term commitment upfront. Finally, GRTC is an eligible recipient of federal and state program funds that can help support the capital and operating costs of the service.

Limitations with the GRTC service option include no ability to customize the service (fleet, facilities, and service type must be consistent with the GRTC system), mandatory compliance with a federal requirement to provide complimentary paratransit service to eligible customers within $\frac{3}{4}$ mile on both sides of any fixed route service, potentially substantial capital investments to meet federal ADA requirements at stop locations, and improvements to meet any requirements from Chesterfield County for bus pullouts.

Virginia Regional Transit (VRT)

VRT has successfully provided communities in Virginia with a capital and operating cost model that is lower than traditional urban transit models. Based in Purcellville, VA, VRT serves fifteen different jurisdictions, including: Loudoun, Fauquier, Culpeper, Orange, Clarke, Warrenton, Page, Augusta and Charlottesville. While VRT generally serves rural communities, service in eastern Loudoun County has similar commercial and residential land use characteristics to the US Route 1/301 corridor in Chesterfield County.

VRT recommended operating a deviated fixed route service on US Route 1/301 using 19-foot minibuses. Deviated fixed route service is an acceptable alternative to providing complimentary paratransit service. Deviations from the route would be based on advanced reservations. VRT also recommended improving customer access to the service by using parking lots inside of residential developments or major businesses along the corridor as stop locations since the majority of households are not directly on the corridor (or more than $\frac{1}{4}$ mile away). This may also eliminate or reduce the need to construct bus pullouts on US Route 1/301 and provide walkable access to stops. VRT expressed a specific interest in expanding its operations to Chesterfield County and similar to GRTC, has experience applying for and administering federal and state grant funds.

Limitations with the VRT service option include no existing facilities in the area (administrative office space and a vehicle staging area with lighting and security would be required), less point-to-point service and less predictable travel times using a deviated fixed route service model where travel times may vary depending on the number and location of reservations. VRT service would also require a forced transfer to connect to GRTC's network and its fare collection method is cash only so it would not offer a one seat ride and seamless fare media for riders traveling on VRT and GRTC to complete their trip outside of or into Chesterfield County.

Bay Transit

Bay Transit is headquartered in Warsaw, Virginia and serves twelve counties (Charles City, Essex, Gloucester, King and Queen, King William, Lancaster, Mathews, Middlesex, New Kent, Northumberland, Richmond, and Westmoreland). Although Bay Transit is the public transportation authority of Bay Aging, a charitable, non-profit organization serving seniors and people with disabilities, transit services are available to the general public.

Bay Transit recommended a demand response service using 14- and 20-passenger vehicles to provide a connection between the US Route 1/301 corridor and existing GRTC routes. Trips would be booked through a call center and require advanced reservations. The benefits of Bay Transit service include the use of smaller vehicles and limited need for investment in sidewalks or bus stop infrastructure since the service would not have fixed stops.

Limitations with the Bay Transit service option include the need for a call center in Chesterfield, concerns with maintaining operations a significant distance away from its headquarters, a forced transfer to connect to GRTC's network requiring different fare media, and uncertainty expressed by Bay Transit regarding its willingness to expand current operations.

GoToWork

GoToWork offers shared rides to individuals, businesses and staffing agencies in the Richmond Metropolitan Area and Hampton Roads that are seeking to provide transportation options to their employees. The goal of the program is to help individuals maintain employment and help employers reduce turnover. In the Richmond Metropolitan Area, the service is focused on filling gaps in hours or days of the week when GRTC service is not available or in areas where GRTC is service is not provided. GoToWork stated during their interview that they originally started off providing door-to-door service but have started to focus on centralized locations to make service more efficient and cut costs. The service's base fee is \$50 per week for one round trip per day of up to 10 miles, five days a week. A tiered-pricing arrangement is used for trips beyond 10 miles and for night shift transportation.

GoToWork recommended a vanpool service using central pickup locations along the US Route 1/301 corridor. Riders would register for trips online or by phone. GoToWork already operates in the Richmond market and maintains a fleet of vehicles that includes minivans, 12-passenger vans, and shuttle buses. GoToWork recommended constructing a park-

and-ride lot in the corridor to allow for vanpooling. Benefits of GoToWork's service include no capital cost for vehicles unless additional vehicles were requested by Chesterfield and the company's existing presence in the Richmond market. Limitations with GoToWork include that service is only available for transportation to/from employment, most vehicles are greater than 10-years old, the cost of constructing and maintaining a park-and-ride lot (although not required) and the viability of the service is unknown since GoToWork was launched in December 2017 as a new venture funded by the Childs Foundation, a non-profit founded in 2016.

Via

Via Transportation, Inc., also known as Via, is a transportation network and real-time ridesharing company based in New York City, where service was first launched in 2013. Via also operates in areas of Chicago and Washington, DC, and its technology is being used in ridesharing projects or pilots in Paris, United Kingdom, Austin and Arlington, Texas and the City of West Sacramento, California. Via offers both platform service, where Via develops the software platform and partners with other transportation providers for the vehicles and drivers, as well as an end-to-end service, where Via provides the software platform, vehicles and drivers.

Via recommended a microtransit solution that would operate using a software platform in a specified zone surrounding the US Route 1/301 corridor. Users of Via's service would be given walking directions to a "virtual bus stop" and the software algorithm would determine which rider to put in which vehicle to balance vehicle utilization and customer experience. Benefits of Via's service include no need for investment in bus stop infrastructure since the service would not have fixed stops and flexibility to adapt the software to the needs of Chesterfield.

Limitations with Via service include the need for riders to walk to the "virtual bus stop" in an area with limited sidewalk and ADA accessible infrastructure, the ability to attract Via to the Chesterfield market (company is focusing on major urban cities), the viability of the service is unknown since this is a new business model, fares are dynamically priced so they fluctuate based on demand, an average higher cost per rider than traditional public transit fares, credit card only fare collection, no guarantee of service availability, and no guarantee of the ability to accommodate persons with disabilities. Through its various pilots, access to services also varies with some locations using solely a mobile app and other locations using a mobile app with the option to call a dispatcher.

Uber

Founded in 2009, Uber Technologies Inc. provides a range of peer-to-peer ridesharing, food delivery, and transportation services. The company is headquartered in San Francisco, California, with operations in 633 cities worldwide, including the Richmond Metropolitan Area. Its platforms can be accessed via its websites and mobile apps. The most appropriate Uber services for the purpose of this study include: Express POOL carpooling service (the cheapest option, pairs you with other riders if there is room available and requires you to walk to a pick up point and walk to your final destination – similar to Via and public transit), uberPOOL carpooling service (the second cheapest

option – pairs you with other riders if there is room available and determines who will be picked up first, and who will be dropped off first), uberX service offering private rides for 1-4 people and uberXL service offering private rides for 1-6 people. As mentioned above, Chesterfield's Community Services Board and Goodwill of Central and Coastal Virginia are working with Uber on a pilot to provide services for eligible participants. The pilot is testing Uber's Uber Central service, which was launched in April 2017. Uber Central allows organizations to manage trips on behalf of its customers, relieving the requirements for customers to have an Uber account or a smart phone. Finally, for the disabled community Uber is piloting a new service called UberWav for riders who use non-folding, motorized wheelchairs to connect with drivers in wheelchair accessible vehicles that are equipped with ramps or lifts. Uber is testing several different models of the service in cities around the world (e.g. Toronto, Austin, Chicago and London) to determine which model will best meet the needs of their riders and drivers.

Uber was unavailable to participate in an interview for this study, however, KHA was able to collect information through Uber's website on service characteristics and availability. Benefits of Uber's services include on-demand 24/7 availability and the ability to share rides if there is room available through the dynamic carpooling feature found with Express Pool and uberPOOL. As a private provider, Chesterfield County would not have to enter into an agreement with Uber. Uber Central's service also provides an option to get around some limitations for specific populations.

Limitations of Uber's services include current availability in the corridor (only uberX and uberXL are available), fares that are dynamically priced so they fluctuate based on demand, an average higher cost per rider than traditional public transit fares, fees for cancelation, credit card only fare collection, no guarantee of service availability, no guarantee of the ability to accommodate persons with disabilities and services can only be requested through its website and smart phone mobile apps (unless customers are eligible to participate in an Uber Central program).

Lyft

Launched in 2012, Lyft is an on-demand transportation company based in San Francisco, California that develops, markets and operates the Lyft car transportation mobile app. Similar to Uber, Lyft offers three service options that were appropriate for this study: Lyft Line service provides the cheapest option and will match passengers with other riders if they are going in the same direction (similar to uberPOOL), Lyft service provides private rides for 1-4 people (similar to uberX), and Lyft Plus service provides private rides for 1-6 people (similar to uberXL).

Lyft was unavailable to participate in an interview for this study, however, KHA was able to collect information through Lyft's website on service characteristics and availability. Lyft offers the same benefits as Via and Uber with on-demand 24/7 availability and the ability to share rides through the dynamic carpooling feature found with Lyft Line. As a private provider, Chesterfield County would not have to enter into an agreement with Lyft.

Lyft also shares the same limitations including current availability in the corridor (only Lyft and Lyft Plus are available), fares that are dynamically priced so they fluctuate based on

demand, the average fare is higher than traditional public transit fares, credit card only fare collection, no guarantee of service availability, no guarantee of the ability to accommodate persons with disabilities and services can only be requested through its website and smart phone mobile apps.

UZURV

UZURV is a Reservation Network Company (RNC) founded in 2015 by two Uber Partners with its headquarters in Richmond, Virginia. The company offers a mobile app and a web app that allows users to create a reservation with choices such as a specific driver and vehicle type. After the reservation is made, users can select a service provider, such as Uber or Lyft, from within the UZURV app and request a ride from the selected transportation provider. UZURV also takes reservations through a call center.

UZURV360 is a service for specialty transportation needs that is designed to meet the Americans with Disabilities Act (ADA) requirements of the special needs and health care communities. The service allows you to reserve a private car with no additional pickups or stops along the way, schedule same day pickups by phone up to 30 minutes before your desired departure time, select a preferred car and CPR certified driver, and receive door-to-door assistance. Similar to UZURV, the app provides a menu of providers including independent rideshare drivers and para-transit providers. The UZURV360 service can also be accessed through the call center. In August 2017, GRTC entered into a one-year contract to pilot UZURV360 providing CARE-On-Demand services along with existing para-transit, taxi, limousine and other specialty providers. Over 10,000 UZURV360 rides have been provided through this partnership and the rides have a 98% on time pick-up rate.

Benefits of the UZURV and UZURV360 services include the ability to reserve and request specific service providers (driver and vehicle), drivers that are specifically trained to serve the needs of those with special needs and access to services through a call center. Limitations of the UZURV service are similar to Uber and Lyft since they are the primary service provider partners. The main limitation of UZURV360 is that a credit or debit card is required for payment. As with other private transportation providers discussed above, UZURV's service offerings are relatively new in the market so it is possible that changes to services may occur as the business model matures.

RideFinders

As mentioned above, RideFinders is a division of GRTC that acts as Central Virginia's transportation demand management (TDM) agency. RideFinders is focused on moving more commuters in fewer vehicles throughout the region to protect air quality and increase the efficiency of the region's transportation network. Programs and services offered by RideFinders include: Transit Information, Vanpool Services, Carpool Matching, Clean Air Campaign, Commuter Choice Program, Telework Program, Emergency Ride Home Program, Transportation Planning, Employer-Based Marketing, Employer Relocation and Site Analysis Services, Bike and Pedestrian Commuter Services, and Park and Ride Lot Information. Additional information on these services is available at: <http://ridefinders.com/about-us/>

RideFinders recommended providing vanpool formation services to companies willing to participate and enrolling employees in the Emergency Ride Home Program (provides taxi or rental car service to get home in the event of an emergency for registered commuters who ride the bus, vanpool, bike or carpool to work at least three days a week). A point person (or marketing agency) would need to be hired and assigned to the corridor to do outreach, facilitate community engagement, gather public input and gain employer buy-in. RideFinders could also conduct employee commute assessments, establish public-private partnerships for financial investment and work with stakeholders to develop and execute a multi-pronged media approach based on the demographics of the corridor.

Benefits of RideFinders include connections to employers in the local community and existing programs that can be used by riders in the US Route 1/301 corridor; extensive experience promoting transit, carpooling and vanpooling, and working with the metropolitan community and employers providing information on mobility options. Vanpooling provides a very low-cost service delivery model since drivers serve in a voluntary capacity in exchange for a free or discounted commute. Vanpool data can also be used to generate federal funds from the Federal Transit Administration.

Limitations with RideFinders service include that vanpool services are only available for transportation to/from employment and park and ride lots need to be established in the corridor. Two park and ride lots have been identified in or near the corridor through VDOT's Park and Ride Investment Strategy (2014) (see Attachment D). One 250-space lot would be constructed along the southern end of the corridor at Route 10 (West Hundred Road) near I-95, Exit 61. The second lot would be a 250-space lot constructed at the northern end of the corridor along US Route 1/301 near Route 150 (Chippenham Parkway). These lots were ranked fifth and sixth respectively for the VDOT Richmond District in the 2014 VDOT Park and Ride Investment Strategy.

Key Findings

Based on the interviews conducted and KHA's technical analysis of the corridor, the following key findings emerged:

1. ***The corridor contains the necessary characteristics to support investment in mobility services.*** An analysis of market factors considered: existing transit service performance, access and availability; population and employment factors (e.g. poverty level, unemployment rate, percentage of population over 65 years old); access to other transportation modes, services or facilities (e.g. households with one or less vehicle; availability of pedestrian and bicycle facilities, park-and-ride lots, and carpooling/vanpooling); location of major employment, shopping and education centers; and travel patterns (see Attachments A and D). The analysis found that in the corridor both the percentage of households in poverty and the percentage of households with no access to a vehicle are double the county's overall averages (15% vs. 7% for households in poverty, 6% vs. 3% for households with no access to a vehicle). In addition, transit service is only available in the northernmost portion of the corridor, pedestrian and bicycle facilities are very limited, and access to many employers, shopping and education centers is largely auto-dependent. Based on these factors, there is enough data to substantiate the need for additional investment in mobility services (transit, carpool/vanpool). This finding is consistent with previous and on-going studies.

2. ***The Transit Network Company (TNC) market is continuing to pilot many different services and business models in search of the right approach.*** TNCs are companies that use Internet-based technology (e.g. websites and mobile apps) to pair passengers with drivers. Numerous TNC start-ups have come into the marketplace in the last 5 to 10 years with varying degrees of success and more established providers like Uber and Lyft are continuing to pilot or introduce new services to access specific markets. Uber and Lyft are also being driven to make adjustments to their service offerings due to growing competition from new start-ups. TNCs are therefore continuing to evolve with a focus on how best to achieve profitability and have limited ability to offer service in all markets.
3. ***Public Transportation providers are the best option available to access significant federal and state funding to support capital and operating costs.*** There are numerous federal and state funding programs available to apply for (as outlined in Attachment C) that can mitigate local capital and operating and maintenance costs. TNCs have been successful in securing discretionary funding through various sources for pilot programs, however, long-term funding to support TNC operations is very limited.
4. ***Gaps in market data should be addressed to right-size services.*** The outreach efforts of the Northern Jefferson Davis Corridor Special Area Plan should be expanded upon to gain additional insights from the public and stakeholders in the corridor on which types of services are they most likely to use if implemented. A market assessment combined with public and stakeholder outreach will help to better inform decisionmakers of the community's requirements and allow services to be scaled accordingly.

Mobility Options for the US Route 1/301 Corridor

Based on the interviews conducted, KHA's technical analysis and discussions with Chesterfield County staff, a comprehensive package of services would best serve the diverse and dynamic mobility needs of the US Route 1/301 corridor market. Public outreach and a market assessment should be considered as some of the first steps to be taken to select, size and scale the service approach. In the interim, KHA developed three scenarios at Chesterfield County's request to help advance consideration of providing enhanced mobility services. The scenarios include information on potential termini and transfer points, hours of operation, headways, stop locations, vehicles, estimated capital and operating costs, fare collection, service initiation and pedestrian facilities. As discussed above, the following service providers or services were not considered in any scenario because these services are not available to the corridor or service providers stated they were not interested or able to provide service: Bay Transit, Groome, Express POOL (Uber), uberPOOL and Lyft Line. The scenarios below are presented as options for further discussion and are not in priority order.

Scenario #1 – Local Bus Service (VRT transfer to existing GRTC routes), Regional Vanpool/Carpool Support

Service Providers	<ul style="list-style-type: none"> ▪ Virginia Regional Transit (VRT) ▪ RideFinders
Termini and Transfer Points	<ul style="list-style-type: none"> ▪ Southern Terminus: John Tyler Community College south of Route 10 ▪ Northern Terminus / Transfer Point: VRT service would provide a connection to existing GRTC service in the City of Richmond at the Food Lion north of Chippenham Parkway
Hours of Operation	<ul style="list-style-type: none"> ▪ 12 hours per day from 6:25 AM to 6:25 PM, Monday through Saturday only
Headways	<ul style="list-style-type: none"> ▪ 30-minute headways
Stop Locations	<p>Southbound:</p> <ul style="list-style-type: none"> ▪ Food Lion, North of Chippenham Parkway (current GRTC stop) ▪ Falling Creek Apartments – 2530 Marina Drive / 6200 block of Jefferson Davis Highway ▪ Dollar General - 6730 Jefferson Davis Highway ▪ Winchester Gardens/Family Dollar – 7307 Taw Street / 7300 block of Jefferson Davis Highway ▪ Defense Logistics Agency – 8000 Jefferson Davis Highway ▪ R&C Wireless Solutions – 9536 Jefferson Davis Highway ▪ Colony Village Apartments – 10250 Colony Village Way / 10200 block of Jefferson Davis Highway ▪ Food Lion – 12120 Bermuda Crossroad Lane / 12100 block of Jefferson Davis Highway ▪ John Tyler Community College – 13101 Jefferson Davis Highway

	<p>Northbound:</p> <ul style="list-style-type: none"> ▪ John Tyler Community College – 13101 Jefferson Davis Highway ▪ Dollar Tree – 12101 Jefferson Davis Highway ▪ Colony Village Apartments – 10250 Colony Village Way / 10200 block of Jefferson Davis Highway ▪ Holiday Mobile Home Park – 9701 Jefferson Davis Highway ▪ Executive Inn & Suites – 8101 Jefferson Davis Highway ▪ Car Stop Convenience – 7431 Jefferson Davis Highway ▪ Bellwood Maisonette Apartments – 6745 Jefferson Davis Highway ▪ Falling Creek Apartments – 2530 Marina Drive / 6200 block of Jefferson Davis Highway ▪ Food Lion, North of Chippenham Parkway (current GRTC stop) <p>Recommended potential stop locations are shown in the Stop Location Figure following this section. Stop locations may require further evaluation and approval by impacted property owners. Depending on average run times, additional stops could be considered.</p>
<p>Vehicles</p>	<ul style="list-style-type: none"> ▪ 19-passenger, ADA compliant minibuses (body on chassis) ▪ 3 vehicles - two minibus vehicles and one support vehicle
<p>Cost Estimate</p>	<ul style="list-style-type: none"> ▪ Capital (initial) = \$180,000 for two buses, a support vehicle and bus stop signs, plus any additional costs for storage and administrative office space (Chesterfield County may choose to provide). FTA useful life standards for the minibuses are 4 years or 100,000 miles. ▪ Operating and Maintenance = \$554,000 to \$592,000 annually (depending on final service plan) <p><i>Note: This is a gross cost estimate. It does not account for fare revenues or capital or operating assistance from the Virginia Department of Rail and Public Transportation (DRPT), Federal Transit Administration (FTA) or Federal Highway Administration (FHWA).</i></p>

Fare Collection	<ul style="list-style-type: none"> ▪ Regular fare of \$1 per trip (one-way), per person ▪ Cash-only fares would be collected upon rider entry
Pedestrian Facilities	<p>VRT would deviate from the fixed route to improve access to the service. Stops that would benefit from improved pedestrian access include:</p> <ul style="list-style-type: none"> ▪ Dollar General - 6730 Jefferson Davis Highway – currently no sidewalk and no crosswalk at the intersection of Swineford Road/Alfalfa Lane and US Route 1/301 ▪ Executive Inn & Suites – 8101 Jefferson Davis Highway – no sidewalk access and crosswalk at the intersection of Dwight Avenue and US Route 1/301 ▪ R&C Wireless Solutions – no sidewalk access and no crosswalk at the intersection of Galena Avenue and US Route 1/301 <p>All other stops either benefit from sidewalk access or VRT will access the parking lot of residential communities or businesses.</p>
Estimated Ridership	<ul style="list-style-type: none"> ▪ New bus routes can take 1 to 3 years to realize their full ridership potential and depend upon numerous factors such as quality of service, frequency, travel time, cost, required transfers, corridor demographics and marketing. Based on the performance of the most comparable segment of the existing GRTC Route 73 and consideration of the factors mentioned above, the annual estimated ridership for this scenario is 45,000 – 60,000. A market assessment survey and additional ridership analysis of routes with similar characteristics in the GRTC system is needed to further refine this estimate.
Other Services	<ul style="list-style-type: none"> ▪ RideFinders would hire and direct a contractor assigned to the corridor to conduct a market survey, facilitate stakeholder engagement, host public hearings and get public input, work with employers, try to establish public-private partnerships for financial investment, and work on a multi-pronged media approach based on the demographics of the corridor. The cost of these services is estimated to be \$250,000.

	<ul style="list-style-type: none"> ▪ Chesterfield County would work with VDOT to construct a new 250 space park and ride lot near Route 150 (Chippenham Parkway). Cost estimates need to be developed for these lots once additional information is available.
<p>Implementation Timeframe</p>	<p>VRT</p> <ul style="list-style-type: none"> ▪ Assuming the use of federal and state funds to offset costs, VRT would apply by February 1, 2019 for state funds that if awarded, would be available in July 2019. The timing of federal funds depends on the source but would require a state and/or local match making the timing no sooner than July 2019. ▪ Assuming funding is awarded, VRT and Chesterfield County would need to execute a service agreement. ▪ Once funding and required approvals for bus stops are in place, VRT would need to set up a small office space along the corridor to handle administrative tasks and store fareboxes, procure vehicles, and establish a vehicle staging area with lighting and security. Bus procurement is expected to be the long lead factor in service initiation and is anticipated to take approximately 5-6 months. <p>RideFinders</p> <ul style="list-style-type: none"> ▪ Assuming the use of federal and state funds to offset costs, RideFinders would apply by February 1, 2019 for state funds that if awarded, would be available in July 2019. The timing of any federal funding depends on the source but would require a state and/or local match likely making the timing no sooner than July 2019. ▪ Once funding and any required approvals are in place, service initiation would likely take 90 days.

Scenario #2 – Regional Bus Service, Regional Vanpool/Carpool Support

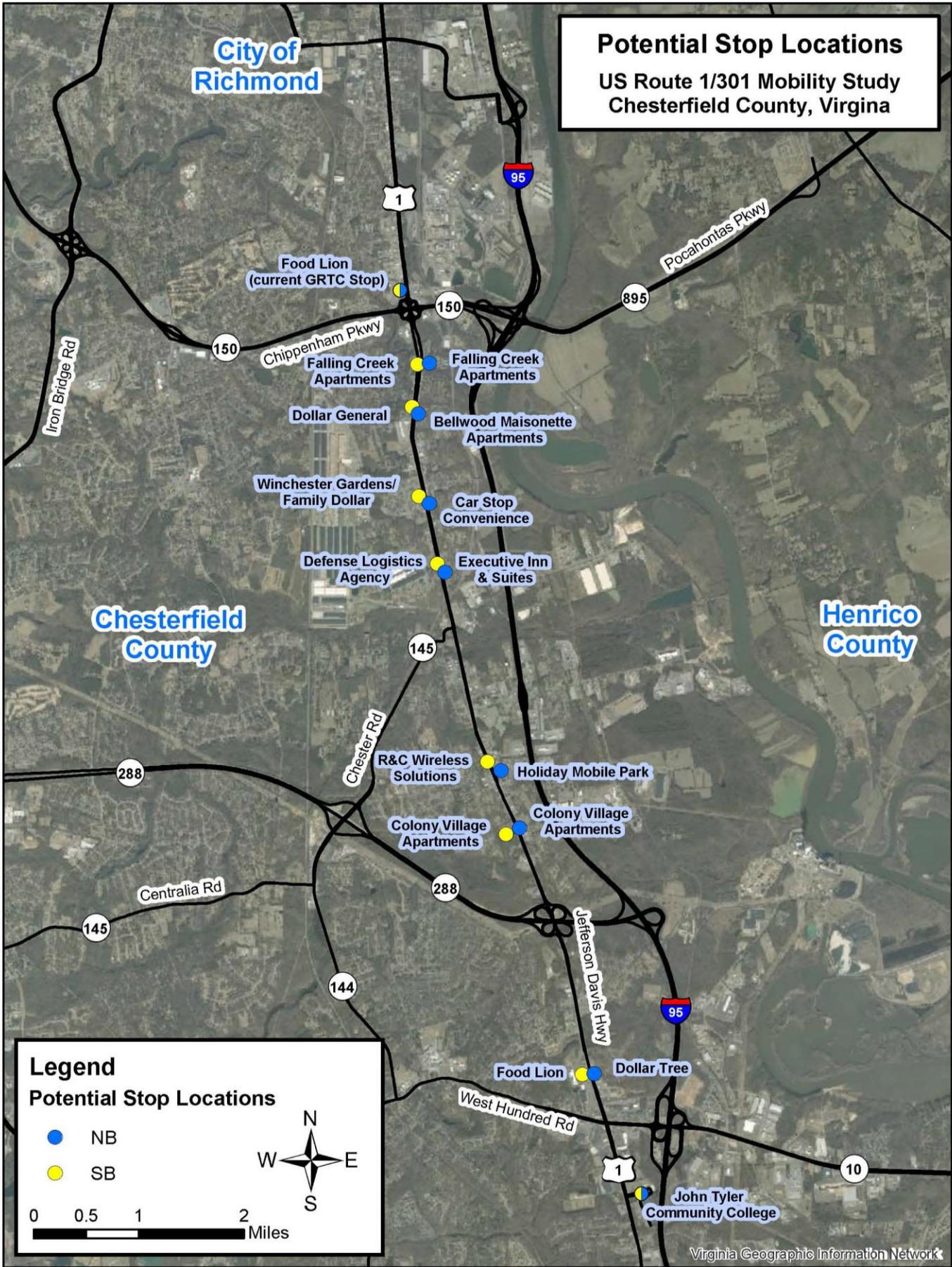
Service Providers	<ul style="list-style-type: none"> ▪ Greater Richmond Transit Company (GRTC) ▪ RideFinders
Termini and Transfer Points	<ul style="list-style-type: none"> ▪ Southern Terminus: John Tyler Community College south of Route 10 ▪ Northern Terminus: Service options include extending GRTC Route 73 (soon to be renamed 3B) to include 7.3 miles of US 1/301 corridor in Chesterfield County or adding a new GRTC Route for the Chesterfield portion of the corridor. Extending Route 3B would not require a transfer. If a new route is added, the transfer point for the connection to the existing GRTC service would be the Food Lion north of Chippenham Parkway.
Hours of Operation	<ul style="list-style-type: none"> ▪ Fourteen hours per day from 5:00 AM to 7:00 PM, Monday through Saturday only
Headways	<ul style="list-style-type: none"> ▪ 30-minute headways
Stop Locations	<p>Southbound:</p> <ul style="list-style-type: none"> ▪ Food Lion, North of Chippenham Parkway (current GRTC stop) ▪ Falling Creek Apartments – 2530 Marina Drive / 6200 block of Jefferson Davis Highway ▪ Dollar General - 6730 Jefferson Davis Highway ▪ Winchester Gardens/Family Dollar - 7307 Taw Street / 7300 block of Jefferson Davis Highway ▪ Defense Logistics Agency - 8000 Jefferson Davis Highway ▪ R&C Wireless Solutions – 9536 Jefferson Davis Highway ▪ Colony Village Apartments – 10250 Colony Village Way / 10200 block of Jefferson Davis Highway ▪ Food Lion – 12120 Bermuda Crossroad Lane / 12100 block of Jefferson Davis Highway ▪ John Tyler Community College – 13101 Jefferson Davis Highway

	<p>Northbound:</p> <ul style="list-style-type: none"> ▪ John Tyler Community College – 13101 Jefferson Davis Highway ▪ Dollar Tree – 12101 Jefferson Davis Highway ▪ Colony Village Apartments – 10250 Colony Village Way / 10200 block of Jefferson Davis Highway ▪ Holiday Mobile Home Park – 9701 Jefferson Davis Highway ▪ Executive Inn & Suites – 8101 Jefferson Davis Highway ▪ Car Stop Convenience – 7431 Jefferson Davis Highway ▪ Bellwood Maisonette Apartments – 6745 Jefferson Davis Highway ▪ Falling Creek Apartments – 2530 Marina Drive / 6200 block of Jefferson Davis Highway ▪ Food Lion, North of Chippenham Parkway (current GRTC stop) <p>Recommended potential stop locations are shown in the Stop Location Figure following this section. Stop locations may require further evaluation and approval by impacted property owners. Depending on average run times, additional stops could be considered.</p>
<p>Vehicles</p>	<ul style="list-style-type: none"> ▪ Extension of Route 73 (3B) – 40-foot, ADA compliant buses ▪ New GRTC Route - 30 or 40-foot, ADA compliant buses <p><i>Note: There would be no meaningful difference in cost if 30-foot buses were used instead of 40-foot buses according to GRTC</i></p>
<p>Cost Estimate</p>	<ul style="list-style-type: none"> ▪ Capital = \$4,000 for bus stop signs. GRTC's existing bus and paratransit fleet is available to provide the service. ▪ Operating and Maintenance = \$1,102,300 annually for fixed route service and \$93,600 annually for paratransit service <p><i>Note: This is a gross cost estimate. It does not account for fare revenues or capital or operating assistance from the Virginia Department of Rail and Public Transportation (DRPT), Federal Transit Administration (FTA) or Federal Highway Administration (FHWA).</i></p>

<p>Fare Collection</p>	<ul style="list-style-type: none"> ▪ Regular fare of \$1.50, reduced fare (for children, seniors, and people with certain disabilities) of \$0.75, which is consistent with existing GRTC service ▪ Cash fares and passes would be collected upon rider entry
<p>Pedestrian Facilities</p>	<p>GRTC would operate fixed route service combined with para-transit service. Stops that would benefit from improved pedestrian access include:</p> <ul style="list-style-type: none"> ▪ Dollar General - 6730 Jefferson Davis Highway – currently no sidewalk and no crosswalk at the intersection of Swineford Road/Alfalfa Lane and US Route 1/301 ▪ Bellwood Maisonette Apartments – 6745 Jefferson Davis Highway – the gravel shoulder could be reinforced for a bus pull out, along with a sidewalk to access the stop ▪ Executive Inn & Suites – 8101 Jefferson Davis Highway – no sidewalk access and crosswalk at the intersection of Dwight Avenue and US Route 1/301 ▪ R&C Wireless Solutions – no sidewalk access and no crosswalk at the intersection of Galena Avenue and US Route 1/301 ▪ Holiday Mobile Home Park – 9701 Jefferson Davis Highway - the gravel shoulder could be reinforced for a bus pull out, along with a sidewalk to access the stop <p>All other stops benefit from sidewalk access. To avoid additional costs and improve safety, GRTC could investigate deviating southbound to serve Falling Creek Apartments and the Food Lion near Route 10, and northbound to serve Colony Village Apartments.</p>
<p>Estimated Ridership</p>	<ul style="list-style-type: none"> ▪ New bus routes can take 1 to 3 years to realize their full ridership potential and depend upon numerous factors such as quality of service, frequency, travel time, cost, required transfers, corridor demographics and marketing. Based on the performance of the most comparable segment of the existing GRTC Route 73 and consideration of the factors mentioned above, the annual estimated ridership for this scenario is 75,000 – 100,000. A market assessment survey and additional ridership analysis of routes with similar characteristics in the GRTC system is needed to further refine this estimate.

<p>Other Services</p>	<ul style="list-style-type: none"> ▪ RideFinders would hire and direct a contractor assigned to the corridor to conduct a market survey, facilitate stakeholder engagement, host public hearings and get public input, work with employers, try to establish public-private partnerships for financial investment, and work on a multi-pronged media approach based on the demographics of the corridor. The cost of these services is estimated to be \$250,000. ▪ Chesterfield County would work with VDOT to construct a new 250 space park and ride lot near Route 150 (Chippenham Parkway). Cost estimates need to be developed for these lots once additional information is available.
<p>Implementation Timeframe</p>	<p>GRTC</p> <ul style="list-style-type: none"> ▪ Assuming the use of federal and state funds to offset costs, GRTC would apply by February 1, 2019 for state funds that if awarded, would be available in July 2019. The timing of federal funds depends on the source but would require a state and/or local match making the timing no sooner than July 2019. ▪ Once funding and required approvals for bus stops are in place, GRTC would provide notice to the public and could initiate service within 30-60 days. <p>RideFinders</p> <ul style="list-style-type: none"> ▪ Assuming the use of federal and state funds to offset costs, RideFinders would apply by February 1, 2019 for state funds that if awarded, would be available in July 2019. The timing of any federal funding depends on the source but would require a state and/or local match likely making the timing no sooner than July 2019. ▪ Once funding and any required approvals are in place, service initiation would likely take 60-90 days.

Potential Stop Locations
 US Route 1/301 Mobility Study
 Chesterfield County, Virginia



Scenario #3 – RNC / TNC Providers

Under this scenario, Chesterfield County would issue an RFP to gauge the interest of RNC and TNC providers to design a program that is customized for the needs of the US Route 1/301 Corridor. Similar approaches have been taken in other localities in Virginia and around the country with varying degrees of success, however, this approach would allow Chesterfield County to challenge these innovative businesses to come up with flexible, creative solutions that can be adapted to the specific needs of the corridor. The RFP would need to provide information on any minimum requirements the county may have (e.g. availability of service, commitment to serving all communities in the corridor, ability to subsidize service to bring costs closer to what riders pay for public transportation, options for accessing and paying for the service, driver and vehicle qualifications and standards, ability to terminate service for any reason).

Next Steps

If Chesterfield decides to continue moving forward the discussion of implementing mobility options for the US Route 1/301 corridor, recommended next steps include the following:

1. Conduct a market assessment survey to capture more specific data for the corridor. The data will provide Chesterfield County with additional information to help understand the market demand and which services are the most attractive so service offerings can be right-sized.
2. Working with the Virginia Department of Rail and Public Transportation, evaluate potential funding options to gauge support for federal and/or state funding. Potential sources of funding are provided in Attachment C.
3. Conduct public and stakeholder outreach on the service options to understand the level of support and any concerns from the community.
4. Select a service option and refine the proposed service(s) based on the market survey and public and stakeholder outreach.
5. Work with service providers to develop detailed cost estimates for the refined service(s) that will support applications for federal, state and local funding. Submit applications in accordance with grant program deadlines (note: this step would be skipped if Scenario #3 is advanced).
6. Once funding is secured, receive approval to advance with procuring services and entering into agreements with service providers as necessary. Approval should also include securing financial and any additional human resources needed for Chesterfield County staff to administer and oversee the contracts/agreements. It should be noted that a multi-year agreement will likely be required for VRT, while GRTC and RideFinders services can likely be funded through shorter term agreements.

**ATTACHMENT A: STUDY CORRIDOR MAP
AND CORRIDOR PROFILE**

Study Area

US Route 1/301 Mobility Study
Chesterfield County, Virginia

City of
Richmond

Chesterfield
County

Henrico
County

Iron Bridge Rd

Chippenham Pkwy

Pocahontas Pkwy

Chester Rd

Jefferson Davis Hwy

Centralia Rd

West Hundred Rd

Legend

Study Corridor

Jurisdiction Limits



0 0.5 1 2 Miles

Corridor Profile

History

According to the Northern Jefferson Davis Special Area Plan, the Northern Jefferson Davis Community has a long history dating back to early English settlements. In the early 20th Century the Richmond and Petersburg Electric Railway generally paralleled Jefferson Davis Highway, encouraging industrial development and the establishment of suburban neighborhoods such as Amphill and Bensley. The railway provided an important connection between Richmond and Petersburg allowing residents to access more affordable land and housing, while maintaining access to jobs, shopping and entertainment in the urban centers. The corridor continued to develop and thrive until the 1950's when I-95 was constructed, which resulted in businesses leaving the Jefferson Davis Corridor in search of better access afforded by I-95 and residents leaving for newer housing developments in western Chesterfield County.

Land Use

Today the US Route 1/301 corridor in Chesterfield County is primarily categorized by a mix of commercial, industrial, and residential land uses. The neighborhoods within the community include a blend of older and newer single-family residences, older and newer multi-family apartments, and mobile home parks. There are also several motels in the corridor that offer weekly rentals. Commercial businesses include large big-box retailers in the south end of the corridor such as Home Depot and Target, strip malls that include grocery stores and various businesses, fast food restaurants and other independent businesses. The DuPont Spruance Plant is the largest employer in the area and is located in the northern portion of the corridor. Lastly, John Tyler Community College is located in the southernmost portion of the corridor. The college is the third largest community college in Virginia.

Transportation

The corridor contains a network of collector, arterial, and limited access roads and provides access to I-95, Chippenham Parkway, and Route 288. Access Chesterfield provides curb-to-curb transportation within Chesterfield County for any purpose to elderly, disabled, and low-income residents. Trips outside of Chesterfield County are limited to medical appointments in Richmond, Petersburg, Colonial Heights, and Hopewell. In addition, the County's Community Services Board and Goodwill of Central and Coastal Virginia launched a pilot in March 2018 with Uber to provide free point-to-point transportation for Chesterfield residents to access employment opportunities, job training, health care or other essential trips such as grocery shopping. The service is restricted to residents who do not own a vehicle and are undergoing treatment for opioid addiction through the Chesterfield Mental Health Support Services. The pilot was originally funded through April 30, 2018 and has since received a one-year extension.

Beyond Access Chesterfield and the Community Services/Goodwill pilot, Greater Richmond Transit Company (GRTC) operates Express Bus Route 82 along the Powhite Parkway to downtown Richmond and several GRTC routes include stops in the county. Within the US Route 1/301 Corridor, GRTC Route 3B extends south from the City of

Richmond into the county, approximately one mile south to the Food Lion near Chippenham Parkway.

RideFinders, a division of GRTC, offers a vanpool program that provides free ridematching service in the Richmond Metropolitan Area to help commuters share a ride to and from work. In the Chester area (southern end of the corridor) there are currently 22 vanpools that depart from the area and go to locations such as Fort Pickett, Fort Belvoir, Fort Lee, and various government offices in Washington, DC. This type of usage for vanpooling is consistent with the Virginia Department of Rail and Public Transportation's (DRPT) 2016 Vanpool Inventory and Impact Report, which found that 29% of vanpools in service in Virginia identified their destinations as military installations.

Finally, several private transportation providers serve the public in the area including, but not limited to, GoToWork, Uber, Lyft and several small taxi companies.

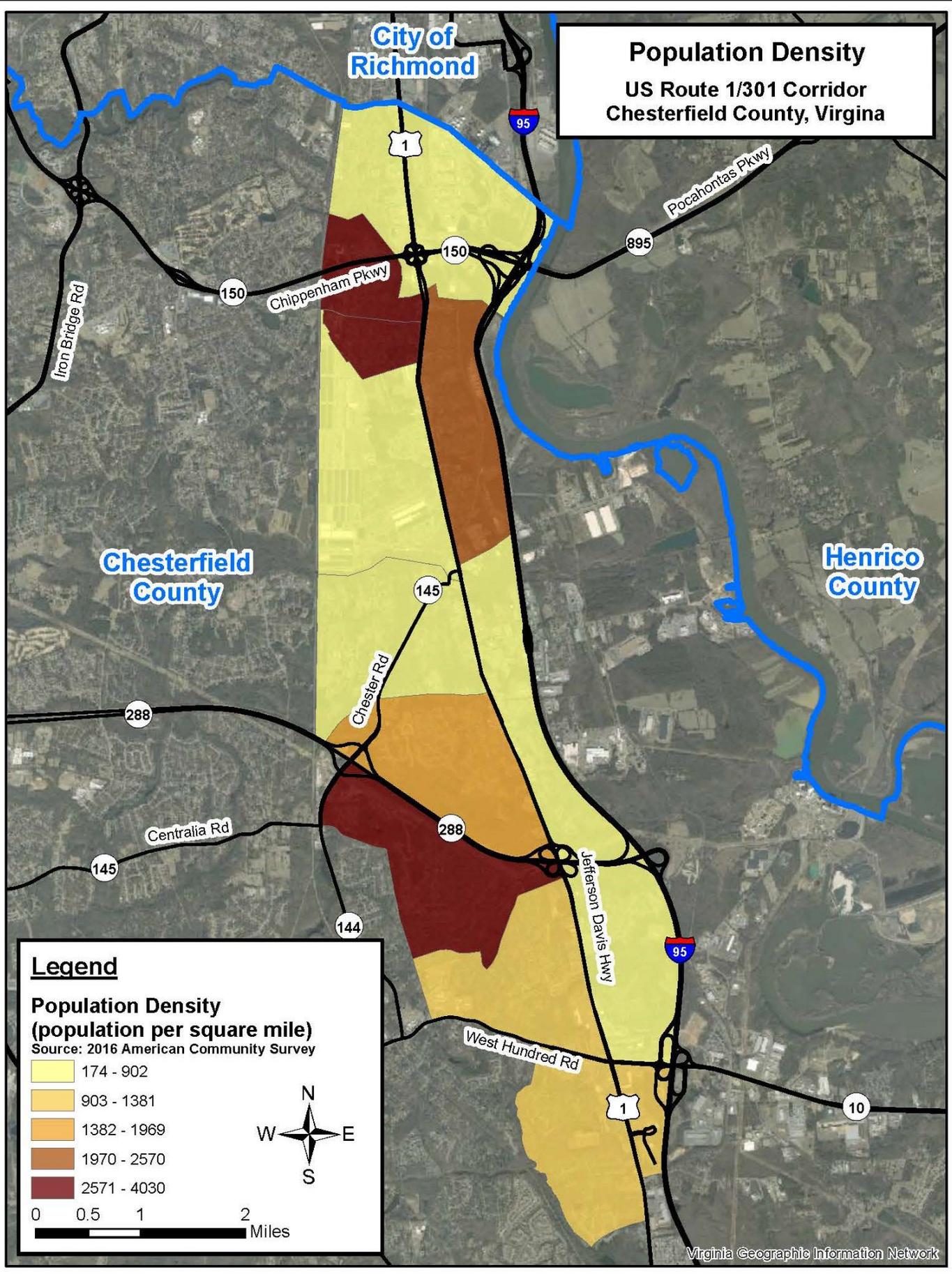
Population

Demographic data for the census block groups within a quarter mile of the corridor from the 2016 American Community Survey indicates that 15% of the households are in poverty, the unemployment rate is 4.9%, and 11% of the population is over 65 years old in the study area. In addition, 6% of households have no vehicles and 35% of households have only one vehicle. By comparison, county-wide demographic data for Chesterfield shows that 7% of all households are in poverty, the unemployment rate is 4.4%, 13% of the population is over 65 years old, 3% of households have no vehicles, and 27% of households have only one vehicle.

To reach employment opportunities, there are a substantial number of workers that travel outside of the corridor for work. Within a three-mile radius of the corridor near US Route 1/301 and Route 150 (Chippenham Parkway), there are approximately 16,634 workers according to 2018 data collected by VDOT. Of those workers, 95% travel outside of the area for work with 19% traveling outside a 25-mile radius. In the southern end of the corridor near I-95, Exit 61 and West Hundred Road, 14,283 workers are within a three-mile radius. Of those workers, 93% travel outside the area for work with 21% traveling outside a 25-mile radius.

Maps provided on the following pages show the population density, 65+ population density, unemployment density, poverty density, no vehicle density, and one vehicle density for the census block groups within a quarter mile the US Route 1/301 corridor.

Population Density
US Route 1/301 Corridor
Chesterfield County, Virginia



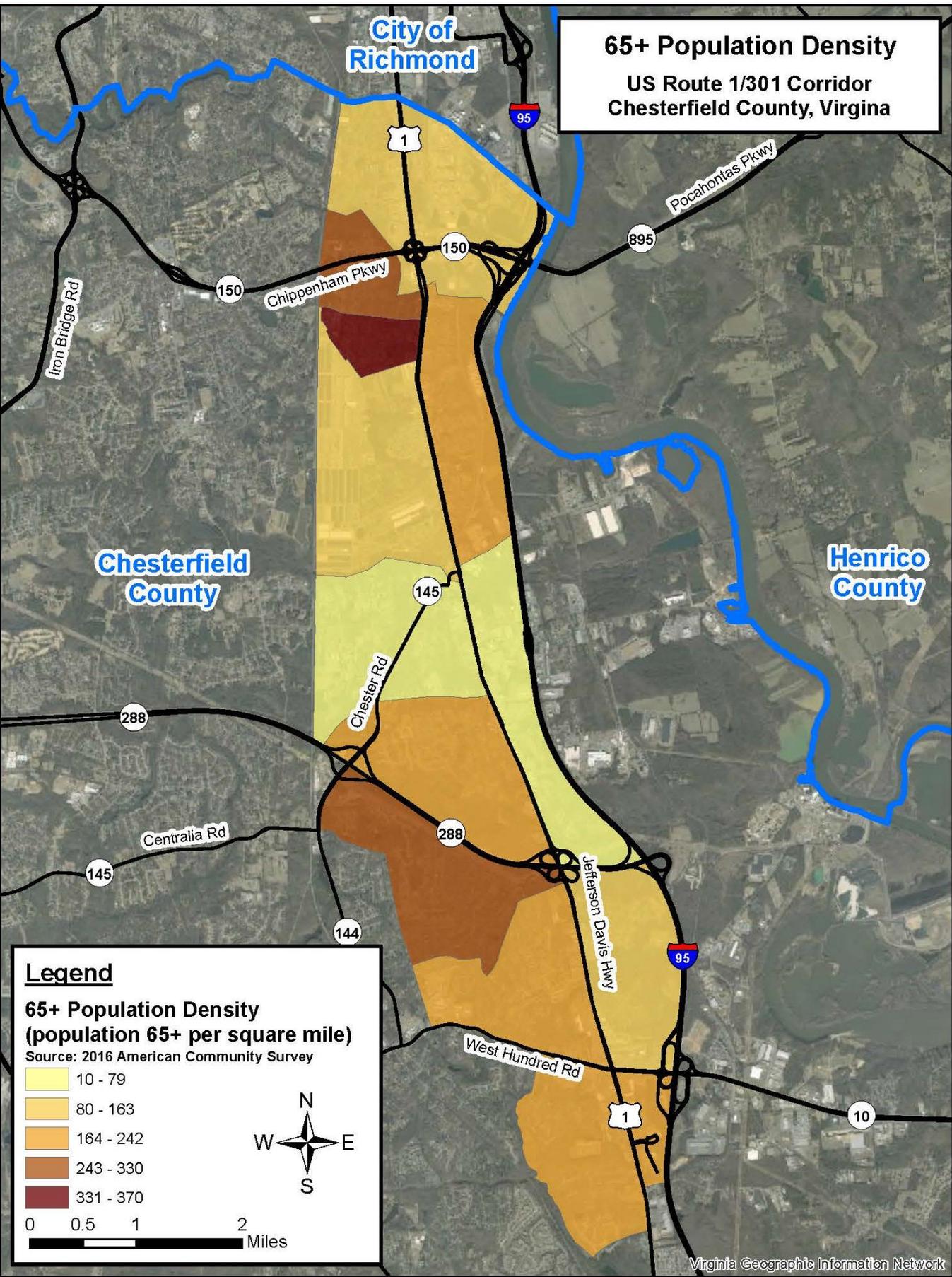
Legend

Population Density
 (population per square mile)
 Source: 2016 American Community Survey

Light Yellow	174 - 902
Yellow-Orange	903 - 1381
Orange	1382 - 1969
Brown	1970 - 2570
Dark Red	2571 - 4030

0 0.5 1 2 Miles

65+ Population Density
US Route 1/301 Corridor
Chesterfield County, Virginia



Legend

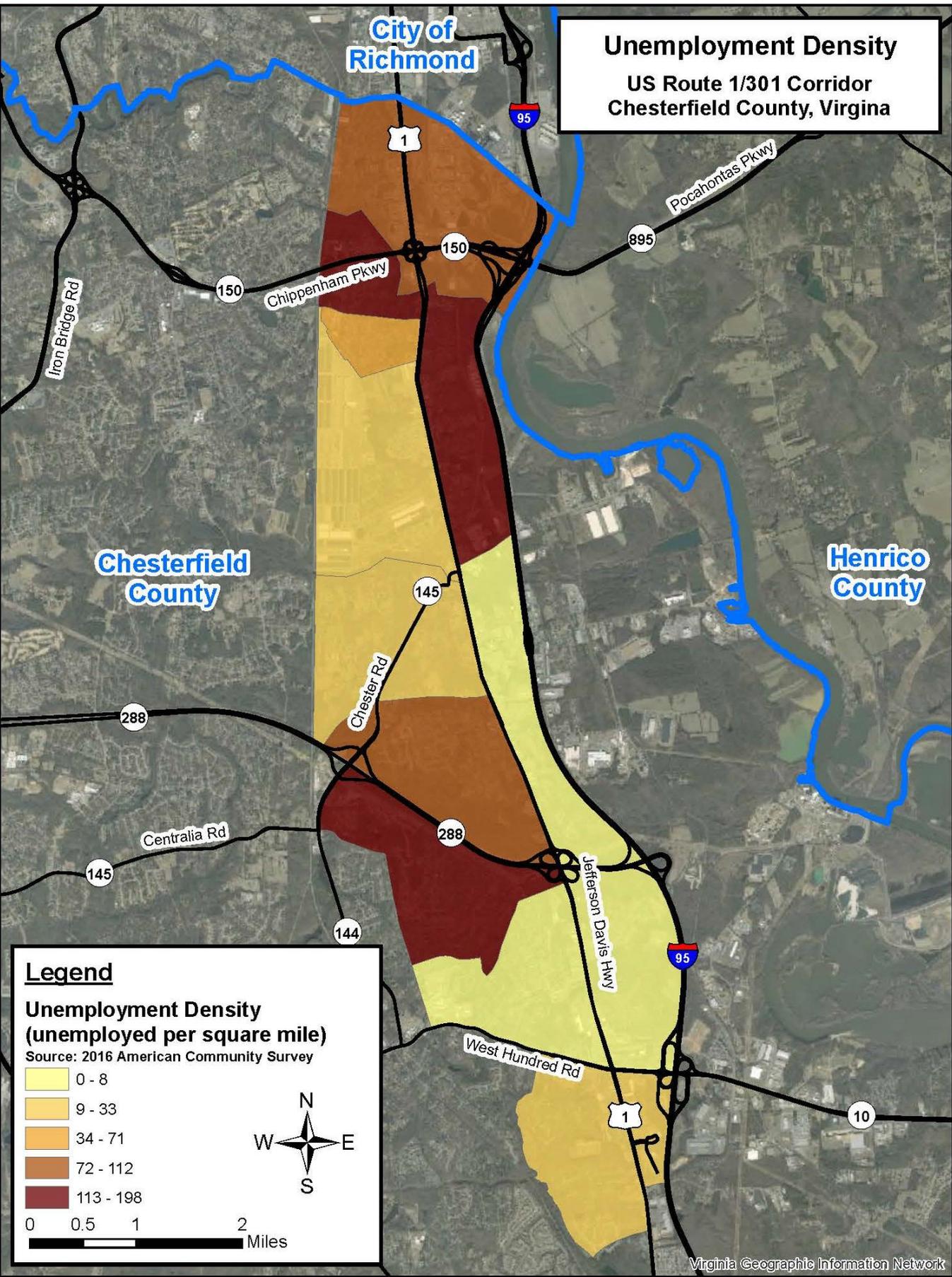
65+ Population Density
(population 65+ per square mile)
Source: 2016 American Community Survey

- 10 - 79
- 80 - 163
- 164 - 242
- 243 - 330
- 331 - 370



0 0.5 1 2 Miles

Unemployment Density
US Route 1/301 Corridor
Chesterfield County, Virginia



Legend

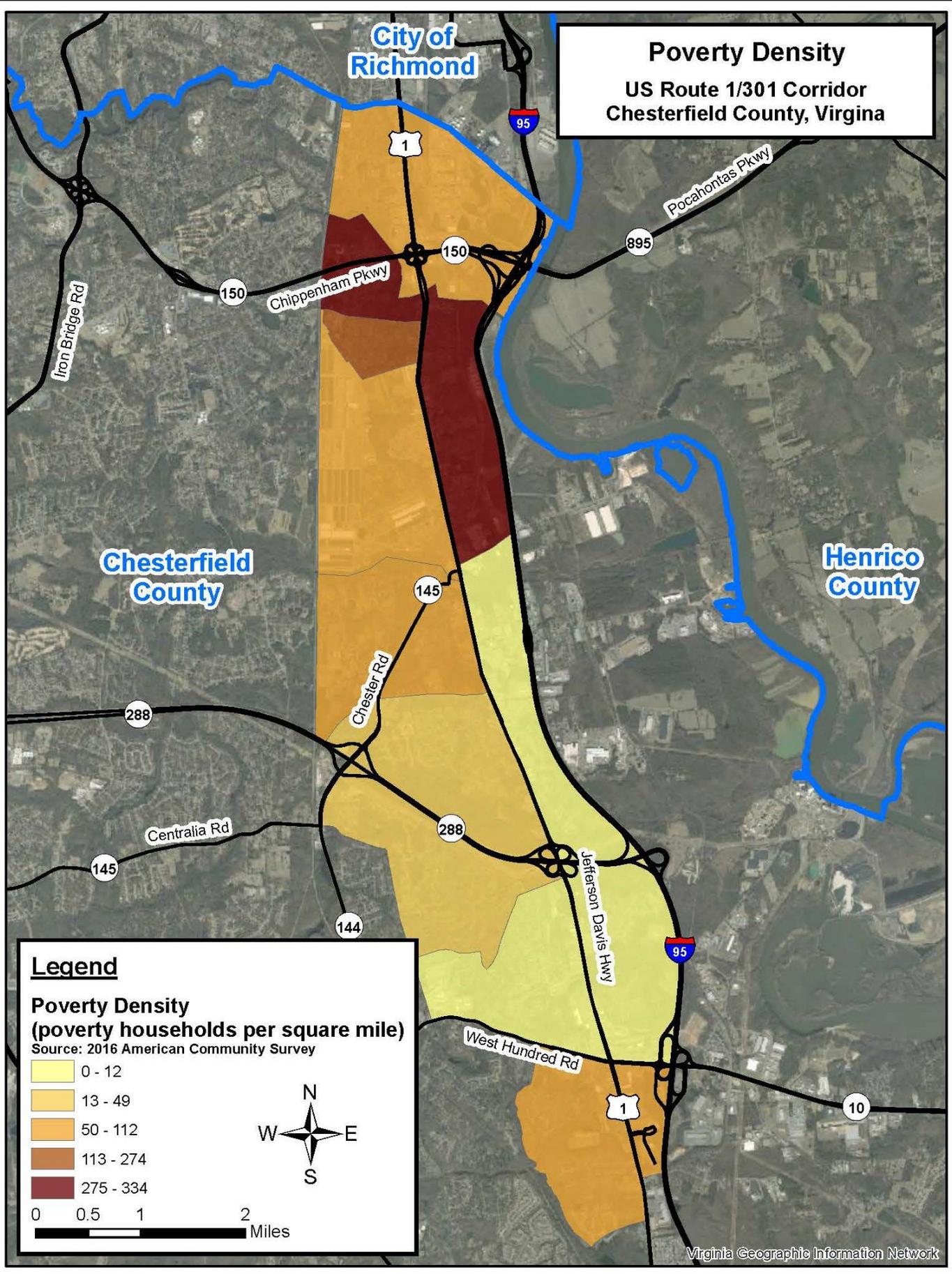
Unemployment Density
(unemployed per square mile)
 Source: 2016 American Community Survey

- 0 - 8
- 9 - 33
- 34 - 71
- 72 - 112
- 113 - 198



0 0.5 1 2 Miles

Poverty Density
US Route 1/301 Corridor
Chesterfield County, Virginia



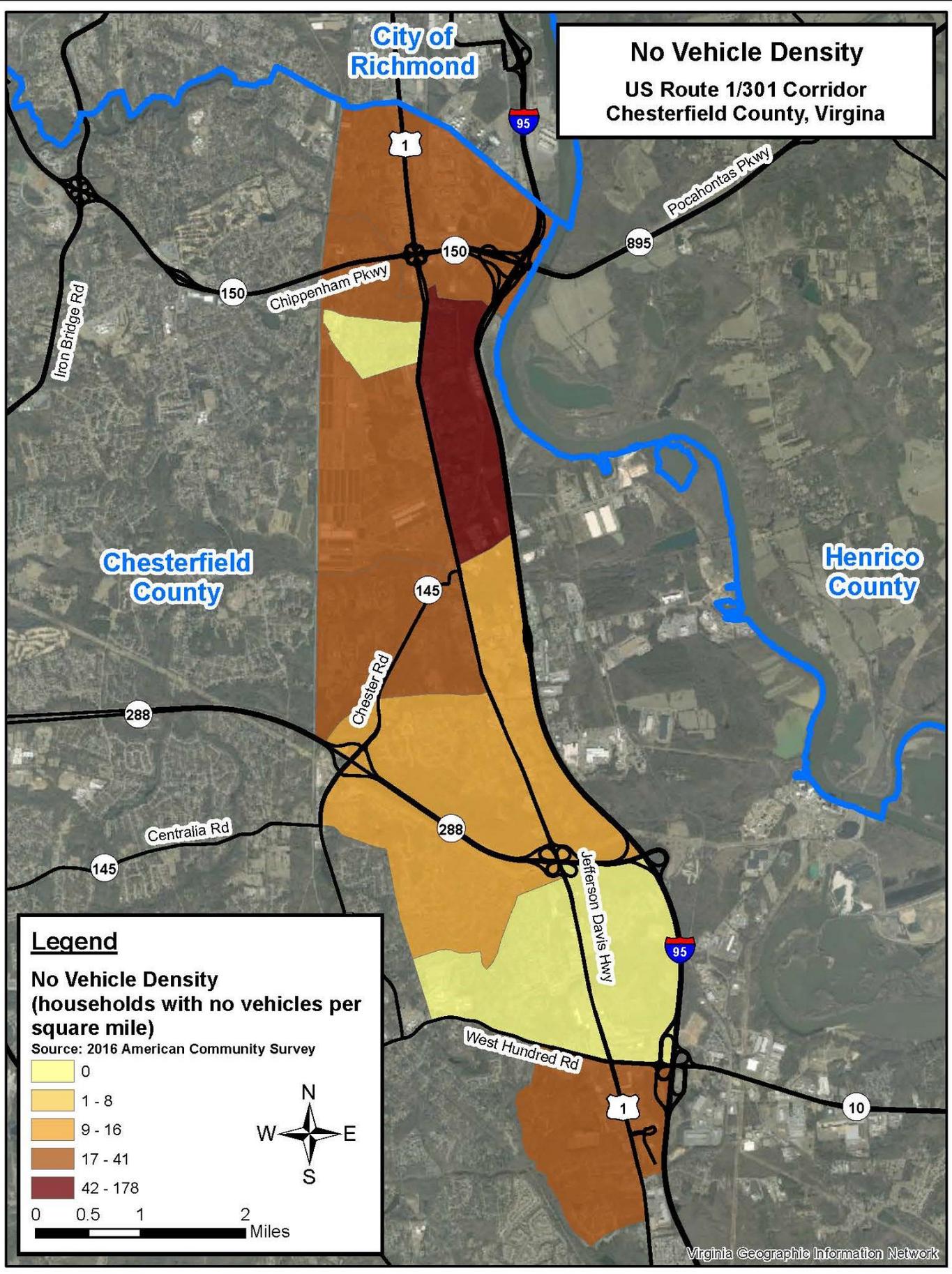
Legend

Poverty Density
(poverty households per square mile)
 Source: 2016 American Community Survey

0 - 12
13 - 49
50 - 112
113 - 274
275 - 334

0 0.5 1 2 Miles

No Vehicle Density
US Route 1/301 Corridor
Chesterfield County, Virginia



Legend

No Vehicle Density
(households with no vehicles per square mile)

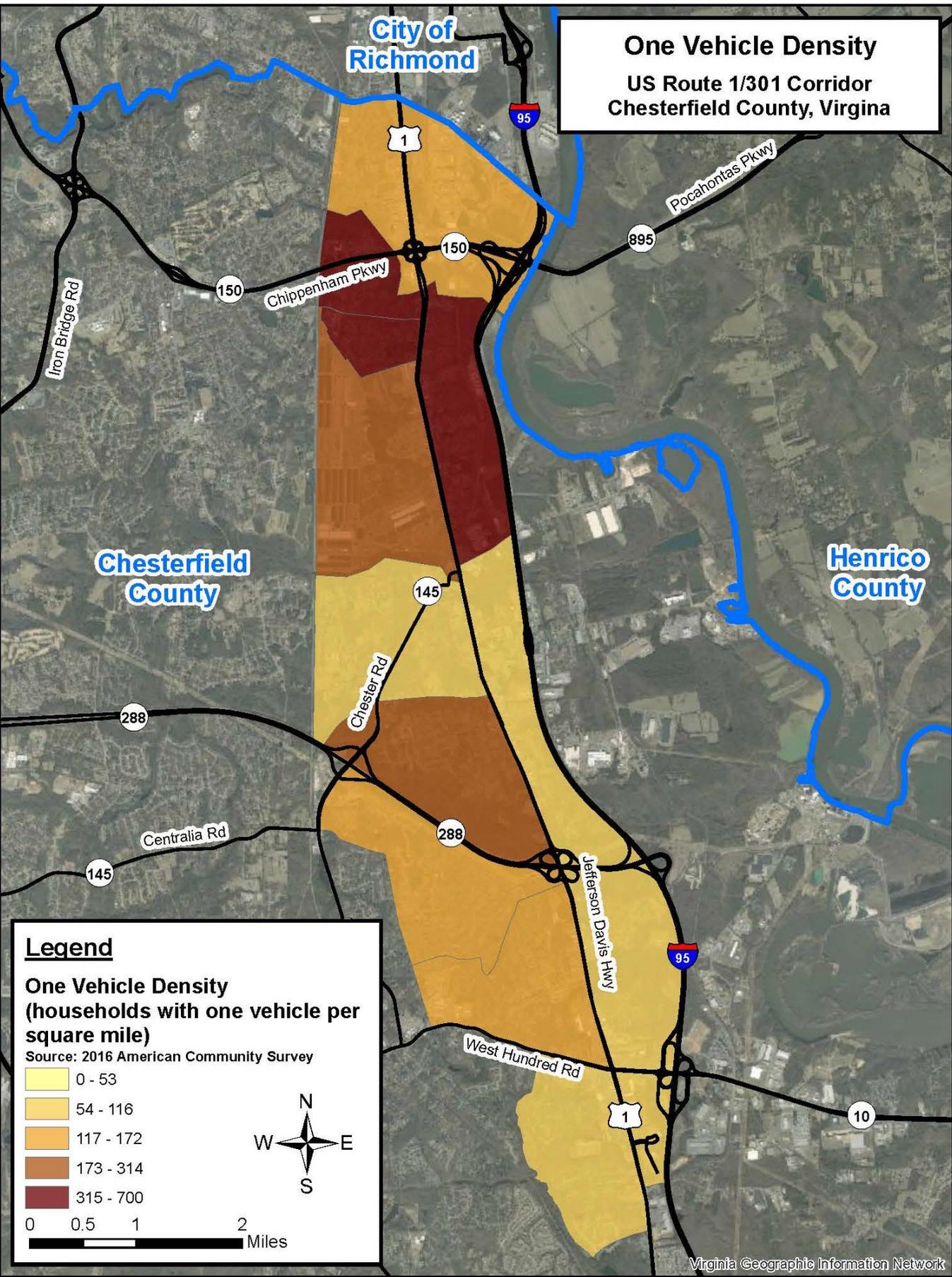
Source: 2016 American Community Survey

- 0
- 1 - 8
- 9 - 16
- 17 - 41
- 42 - 178



0 0.5 1 2 Miles

**One Vehicle Density
US Route 1/301 Corridor
Chesterfield County, Virginia**

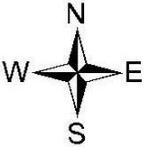


Legend

**One Vehicle Density
(households with one vehicle per
square mile)**

Source: 2016 American Community Survey

- 0 - 53
- 54 - 116
- 117 - 172
- 173 - 314
- 315 - 700



0 0.5 1 2 Miles

ATTACHMENT B: SERVICE PROVIDER MATRIX

Chesterfield County - US Route 1/301 Mobility Study
Service Provider Matrix

Service Provider	Recommended Service Type(s)	Vehicles	Proposed Route (Stops, Termini, and Transfer Points)	Hours of Operation	Headways	Fares	Additional Corridor Infrastructure	Capital / Operating Cost	Limitations/ Concerns/ Other Notes
GRTC	- Fixed route (with no deviations and no on-demand service) - Available to all users - Complimentary paratransit service required	- 30 ft. or 40 ft. vehicles	- Extension of GRTC Route 73 (new 3B) or new service just in Chesterfield County to John Tyler Community College	- Flexible service hours depending on Chesterfield's needs and budget - Route 73 operates from 5:00 AM to 1:00 AM on weekdays and 6:15 AM to 1:30 AM on weekends	- Route 73 has headways ranging from about 20 minutes to 70 minutes depending on the time of day and day of week	- Route 73: regular fare = \$1.50, reduced fare (for children, seniors, and people with certain disabilities) = \$0.75	- ADA compliant stops placed in accessible and walkable areas - Installation of signals at intersections where the bus will be turning around for safety and schedule adherence - Bus pullouts required due to high speeds on Route 1/301	- CAPITAL: \$4,000 for bus stop signs (existing bus fleet will be used) - OPERATING: \$1.1m for fixed route + \$93K for paratransit annually	- No options for vehicles smaller than 30-foot buses - Requires substantial capital and operating investment
Virginia Regional Transit (VRT)	- Deviated fixed route service - Available to all users - Complimentary paratransit service not required	- 19 passenger minibus (body on chassis)	- Deviated fixed route service on Route 1/301 between the City of Richmond and John Tyler Community College - Recommend structuring the fixed route to go into some of the apartment complexes for pick-up (to reduce the need for bus pullouts on Route 1/301)	- Flexible service hours depending on Chesterfield's needs and budget - Services vary by location and range from about 7 AM to 10 PM	- Headways would need to be determined based on expected ridership	- Recommends \$1 fare each way - Currently all fares are collected in cash (in very early stages of electronic fare collection for some routes)	- Small office space to do paperwork and store fare boxes - Area to stage buses (suggested area near flea market) - Signage for bus stops required - Bus shelters recommended - Bus pullouts recommended (for stops on Route 1/301) - Sidewalks recommended	- CAPITAL: two 19 passenger buses, support vehicle, bus stop signs = \$180K - OPERATING: \$550-\$600K annually	- Need for a vehicle staging area with lighting and security is a concern - Would force a transfer to access GRTC network - Only accepts cash fares
Bay Transit	- Demand response service - Available to all users	- 14 and 20 passenger vehicles	- Demand response service - Recommend using demand response to provide connection to existing GRTC routes	- Need more information on projected ridership to recommend hours of operation - Bay Transit operates on-demand service from 6:00 AM to 6:00 PM Monday - Friday - Willing to consider weekend or later weekday service based on Chesterfield's needs and budget - Recommend agreement with local private providers for late-night/early-morning operation (set rate based on mileage)	- N/A for demand response service	- Fares for current service are \$2 per trip (each direction) - Trips are booked through a call center and require 24-hour advanced notice - Currently offer a book of tickets for a reduced rate (10 tickets for \$12)	- Call center in Chesterfield and staffing - Demand response service does not require the significant investment for sidewalks and bus stops that would be required for a fixed route service	- CAPITAL: 14 passenger bus = \$85k - \$90k, 20 passenger bus = \$100k - \$110k (costs include fare box and destination sign) - OPERATING: Cost per trip for other Bay Transit service is \$10-\$11	- Concerned with maintaining operations from a distance (Headquarters are in Warsaw, VA but there is a small office in New Kent County) - Bay Transit currently only serves rural areas and use FTA Formula Grants for Rural Areas (Section 5311) for capital and operating costs
GoToWork	- Vanpool service from central pick-up locations - Only available for transportation to/from employment	- 12-passenger vans, shuttle buses, and minivans - Size of vehicle depends on route - Some vehicles are ADA accessible - Most vehicles are greater than 10 years old	- Recommend approximately 10 locations for pick-up spots on Route 1/301 corridor - Recommend express route that goes to downtown Richmond	- 4 AM - Midnight	- N/A	- Base fare is \$50 per week for 5-day work week (\$5 each trip) - Riders can register to use the service online or by phone - Payment must be made in advance of ride - Fare increases if route is greater than 10 miles - Fare increases for night-shift transportation (night shift hours are 4 AM to 6 AM and 7 PM to midnight) - Any subsidies provided by the County would reduce fares	- Recommend constructing a park-and-ride lot in the area to allow for vanpooling	- CAPITAL: None for vehicles unless additional or newer vehicles requested - OPERATING: Operational cost dependent on subsidy Chesterfield is willing to pay for service	- Very new in Richmond market (began operations in August 2017) - Current ridership is 75 daily riders - GoToWork sees approval of funding for a centralized vanpool location as a barrier to entry
Via / Uber / Lyft / UZURV	- Microtransit (either platform service where Via or UZURV develops the software platform and partners with other transportation providers or end-to-end service where Via, UZURV, Uber or Lyft launches the transportation network) - Available to all users	- Software platforms can be designed for any vehicle type	- Depending on the service type, "virtual bus stops" where users are given walking directions to a pick-up location can be used or door-to-door service can be provided	- Flexible with service hours depending on Chesterfield's needs and budget	- Service is on-demand or with UZURV can set up using a reservation system	- Fare structure is flexible, based on demand and would depend on how much of the fare Chesterfield subsidizes	- No bus stop infrastructure required but limited sidewalks are a concern since riders must walk to "virtual bus stops"	- CAPITAL: Technology platform cost dependent on specific service in the case of Via but likely in the "high tens of thousands" - OPERATING: Operational cost of end-to-end microtransit service would include costs of paying drivers, leasing vehicles, and technology. Depends on the program design.	- The US Route 1/301 Corridor may not be substantial enough to entice providers into the market - Service availability is dynamic and not guaranteed. Drivers can refuse requests for service. - Costs for riders are closer to taxi fares, substantially higher than average public transportation fares - Access to services may require a smartphone and in all cases requires a credit
RideFinders	- Transportation Demand Management - Only available for transportation to/from employment - Emergency Ride Home Program	- Vanpool / carpool services - Market assessment survey - Public and business outreach	- N/A	- N/A	- N/A	- N/A	- Recommends sidewalks, bike lanes, and bus service	- \$250K for service promotion, market assessment and other services	- RideFinders' budget and staff are constrained, requiring additional funding to best serve the corridor

ATTACHMENT C: POTENTIAL SOURCES OF FUNDING

Funding Source Summary

Funding Source	Match Ratio	Description
Federal Funding		
FTA Section 5307 – Small Urban Areas Program	<ul style="list-style-type: none"> ▪ Up to 50% of net operating expenses ▪ Up to 80% of eligible capital and planning expenses 	Supports operating and capital costs of transit operators in small urban areas
FTA Section 5339 – Grants for Bus and Bus Facilities	Up to 80% of eligible capital expenses	Supports the replacement, rehabilitation and purchase of buses and related equipment, and construction of bus-related facilities including technological changes or innovations to modify low or no emission vehicles or facilities
FTA Section 5303 – Metropolitan Planning	Up to 80% of eligible expenses	Supports transit planning expenses. <i>Note: Metropolitan Planning Organizations are the only eligible recipients.</i>
FHWA Congestion Mitigation and Air Quality Improvement Program (CMAQ)	Up to 80% of eligible expenses	Flexible funding for State and local governments for transportation projects and programs that help meet the requirements of the Clean Air Act
State Funding		
Capital Assistance	Up to 96% of eligible expenses using Tier Percentages	Supports costs borne by eligible recipients for public transportation projects
Operating Assistance	Fluctuates based on amount requested, last several years around 20% state funding	Supports costs borne by eligible recipients for operating related public transportation expenses
Demonstration Project Assistance	Up to 80% of eligible expenses	Supports innovative investments in all functional areas of public transportation
State Technical Assistance Program	Up to 50% of eligible expenses	Supports planning or technical assistance to help improve or initiate public transportation related services
TDM Operating Assistance Program	Up to 80% of eligible expenses	Supports new, pilot and innovative Transportation Demand Management projects and programs that encourage the reduction of single occupant vehicle travel or provides commute options
Transportation Management Project Assistance	Up to 80% of eligible expenses	Supports new, pilot and innovative Transportation Demand Management projects and programs that encourage the reduction of single occupant vehicle travel or provides commute options

FTA SECTION 5307 - SMALL URBAN AREAS PROGRAM

PROGRAM GOALS

The purpose of the FTA Section 5307 program is to provide funds to urbanized areas (UZAs) and to states for public transportation capital projects, operating assistance, job access and reverse commute projects, and for transportation-related planning.

This program makes federal resources available to UZAs and to Governors for transit capital and operating assistance in UZAs, and for transportation related planning. An urbanized area is an incorporated area with a population of 50,000 or more that is designated as such by the U.S. Department of Commerce, Bureau of the Census.

The following are goal areas of the FTA Section 5307 program:

1. Assist in the planning, engineering, design, construction, evaluation, and maintenance of public transportation projects, equipment, and facilities;
2. Facilitate cooperation between public transportation companies and private companies engaged in public transportation to encourage the planning and establishment of areawide public transportation systems needed for economical and desirable urban development;
3. Encourage mobility management, employment-related transportation alternatives, joint development practices, and transit-oriented development;
4. Provide financial assistance to states and local governments to help carry out national goals related to mobility for all, including elderly individuals, individuals with disabilities, and economically disadvantaged individuals;
5. Invest in bus and bus-related activities such as replacement, overhaul, and rebuilding of buses; and
6. Invest in crime prevention, public transportation safety, and security equipment.

The FTA Section 5307 program is authorized under the Fixing America's Surface Transportation (FAST) Act passed on December 3, 2015 (*Statutory Reference: 49 U.S.C. Section 5307 / FAST Act Section 3004*).

ELIGIBLE RECIPIENTS AND EXPENSES

Each of the eligible small urban recipients (noted above) apply for 5307 funding directly from the FTA. The 5307 funding may be used to cover up to 50% of a recipient's operating deficit (expenses minus revenues) and up to 80% of eligible capital and planning expenses.

Eligible operating expenses are those costs necessary to operate, maintain, and manage a public transportation system such as driver salaries, fuel, and items having a useful life of less than one year.

Eligible Capital project expenses involve purchasing, leasing, constructing, maintaining, or repairing facilities, rolling stock, and equipment for use in a public transportation system. Note that, while the Virginia Department of Rail and Public Transportation (DRPT) does

not match expenses for preventive maintenance, the FTA recognizes preventive maintenance as a capital expense.

Eligible Planning and Project Development expenses include, but are not limited to: studies relating to management, operations, capital requirements, and economic feasibility; work elements and related activities preliminary to and in preparation for constructing, acquiring, or improving the operation of facilities and equipment; plans and specifications; evaluation of previously funded projects; job access and reverse commute projects; and other similar or related activities before and in preparation for the construction, acquisition, or improved operation of public transportation systems, facilities, and equipment.

MATCHING REQUIREMENTS AND LIMITS OF FUNDING

DRPT typically passes through the funding identified for each UZA in the Federal Register each year. DRPT makes adjustments as needed for apportionments to UZAs that do not provide transit or for multiple providers within an urbanized area.

SELECTION PROCESS

DRPT includes the recommended allocations in the Draft Six-Year Improvement Program (SYIP). The Commonwealth Transportation Board (CTB) approves the release of the draft SYIP to the public for comment in April and following receipt of public comments, the CTB approves the final SYIP in June.

APPLICATION PROCEDURE

There is no separate application required for this program. DRPT allocates funding by applying the federal apportionments in the Federal Register. The recipient will then apply to the FTA for the amount of funding allocated in the SYIP.

ADDITIONAL INFORMATION

Please see FTA Circular 9030.1E (January 16, 2014) – Urbanized Area Formula Program for additional information:

https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FINAL_FTA_circular9030.1E.pdf

PROGRAM GOALS

The Bus and Bus Facilities Infrastructure Investment Program (49 U.S.C. 5339) makes federal resources available to states and direct recipients to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities including technological changes or innovations to modify low or no emission vehicles or facilities. Funding is provided through formula allocations and competitive grants. A sub-program, the Low- or No-Emission Vehicle Program, provides competitive grants for bus and bus facility projects that support low and zero-emission vehicles.

The FTA Section 5339 program is authorized under the Fixing America’s Surface Transportation (FAST) Act passed on December 3, 2015 (*Statutory Reference: 49 U.S.C. Section 5339 / FAST Act Section 3017*).

ELIGIBLE RECIPIENTS AND EXPENSES

Eligible recipients include designated recipients that operate fixed route bus service or that allocate funding to fixed route bus operators; state or local governmental entities; and federally recognized Indian tribes that operate fixed route bus service that are eligible to receive direct grants under 5307 and 5311.

Eligible recipients that receive grant funding under the formula or discretionary programs may allocate amounts from the grant to subrecipients that are public agencies or private nonprofit organizations engaged in public transportation.

Eligible Capital expenses include projects to replace, rehabilitate and purchase buses, vans, and related equipment, and to construct bus-related facilities, including technological changes or innovations to modify low or no emission vehicles or facilities.

MATCHING REQUIREMENTS AND LIMITS OF FUNDING

The federal share of eligible capital costs is 80% of the net capital project cost, unless the grant recipient requests a lower percentage. The Federal share may exceed 80% for certain projects related to the ADA, the Clean Air Act (CAA), and certain bicycle projects. Funds remain available for obligation for four fiscal years. This includes the fiscal year in which the amount is made available or appropriated plus three additional years.

SELECTION PROCESS

DRPT includes formula allocations in the Draft Six-Year Improvement Program (SYIP). The Commonwealth Transportation Board (CTB) approves the release of the draft SYIP to the public for comment in April and following receipt of public comments, the CTB approves the final SYIP in June. Discretionary grant awards are selected by FTA and/or the United States Department of Transportation.

APPLICATION PROCEDURE

There is no separate application required for formula funds under this program. Discretionary grant programs must be applied for in accordance with Notices of Funding Opportunity published by FTA in the Federal Register.

ADDITIONAL INFORMATION

Please see FTA Circular 5100.1 (May 18, 2015) – Bus and Bus Facilities Formula Program for additional information:

https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/Final_FTA_C_5100_4-16-15.pdf

PROGRAM GOALS

Provides funding and procedural requirements for multimodal transportation planning in metropolitan areas and states. Planning needs to be cooperative, continuous, and comprehensive, resulting in long-range plans and short-range programs reflecting transportation investment priorities.

The FTA Section 5303 program is authorized under the Fixing America's Surface Transportation (FAST) Act passed on December 3, 2015 (*Statutory Reference: 49 U.S.C. Section 5303 / FAST Act Section 3003*).

ELIGIBLE RECIPIENTS AND EXPENSES

Eligible recipients include State Departments of Transportation (DOTs) and Metropolitan Planning Organizations (MPOs).

Funds are available for planning activities that:

(A) support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;

(B) increase the safety of the transportation system for motorized and nonmotorized users;

(C) increase the security of the transportation system for motorized and nonmotorized users;

(D) increase the accessibility and mobility of people and for freight;

(E) protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;

(F) enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;

(G) promote efficient system management and operation; and

(H) emphasize the preservation of the existing transportation system.

MATCHING REQUIREMENTS AND LIMITS OF FUNDING

The federal share of eligible capital costs is up to 80% and funds are available for four years.

SELECTION PROCESS

Federal planning funds are first apportioned to State DOTs. State DOTs then allocate planning funding to the MPOs. Funds are apportioned to states by a formula that includes each state's urbanized area population in proportion to the total urbanized area population for the nation, as well as other factors. States can receive no less than .5 percent of the amount apportioned. These funds, in turn, are sub-allocated by states to MPOs by a formula that considers each MPO's urbanized area population, their individual planning needs, and a minimum distribution. MPOs administer the funds and select projects through their program management procedures.

APPLICATION PROCEDURE

There is no separate federal application required for funds under this program. MPO procedures must be followed to receive funding.

ADDITIONAL INFORMATION

Please see FTA Circular 5100.1 (May 18, 2015) – Bus and Bus Facilities Formula Program for additional information:

https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/5303-5304-5305_Program_Metropolitan_and_Statewide_Planning_Fact_Sheet_FINAL.pdf

PROGRAM GOALS

The CMAQ program provides a flexible funding source to state and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act. Funding is available to reduce congestion and improve air quality for areas that do not meet the National Ambient Air Quality Standards for ozone, carbon monoxide, or particulate matter (nonattainment areas) and for former nonattainment areas that are now in compliance (maintenance areas).

The CMAQ program is authorized under the Fixing America's Surface Transportation (FAST) Act passed on December 3, 2015 (*Statutory Reference: 23 U.S.C. Section 149 / FAST Act Section 1114*).

ELIGIBLE RECIPIENTS AND EXPENSES

Funds are apportioned to State DOTs and may be used for a transportation project or program that is likely to contribute to the attainment or maintenance of a national ambient air quality standard, with a high level of effectiveness in reducing air pollution, and that is included in the metropolitan planning organization's (MPO's) current transportation plan and transportation improvement program (TIP) or the current state transportation improvement program (STIP) in areas without an MPO.

Related to transit, bicycle and pedestrian, and Transportation Demand Management (TDM) projects, examples of eligible projects types are listed below, but are not limited to the following:

Transit Improvements

- a. New transit facilities, if associated with new or enhanced public transit; routine maintenance or rehabilitation of existing facilities is not eligible;
- b. New transit vehicles to expand the fleet or replace existing vehicles;
- c. Fuel is an eligible expense only as part of a project providing operating assistance for new or expanded transit service;
- d. Operating assistance to introduce new transit service or the incremental cost to expand existing service; and
- e. Transit fare subsidies, under specific conditions designed to prevent the NAAQS from being exceeded.

Bicycle and Pedestrian Facilities and Programs

- a. Constructing bicycle and pedestrian facilities (paths, bike racks, support facilities, etc.) that are not exclusively recreational and reduce vehicle trips;
- b. Non-construction outreach related to safe bicycle use; and
- c. Establishing and funding State bicycle/pedestrian coordinator positions for promoting and facilitating nonmotorized transportation modes through public education, safety programs, etc. (limited to one full-time position per State).

TDM

- a. Fringe parking;
- b. Traveler information services;
- c. Shuttle services;
- d. Guaranteed ride home programs;
- e. Carpools, vanpools;
- f. Traffic calming measures;

- g. Parking pricing;
- h. Variable road pricing;
- i. Telecommuting/Teleworking;
- j. Employer-based commuter choice programs; and
- k. Marketing and outreach efforts to expand use of TDM measures.

There are several general conditions for operating assistance eligibility under the CMAQ program (see the November 2013 CMAQ Program Interim Guidance for a complete discussion on CMAQ project eligibility requirements):

- a. Operating assistance is limited to start up operating costs for new transportation services or the incremental costs of expanding such services, including transit, commuter and intercity passenger rail services, intermodal facilities, and travel demand management strategies, including traffic operation centers.
- b. In using CMAQ funds for operating assistance, the intent is to help start up viable new transportation services that can demonstrate air quality benefits and eventually cover costs as much as possible. Other funding sources should supplement and ultimately replace CMAQ funds for operating assistance, as these projects no longer represent additional, net air quality benefits but have become part of the baseline transportation network. The provisions in 23 U.S.C. 116 place responsibilities for maintenance of transportation facilities on the States. Since facility maintenance is akin to operations, a time-limited period of CMAQ assistance provides adequate incentive and flexibility while not creating a pattern of excessive or even perpetual support.
- c. Operating assistance includes all costs of providing new transportation services, including, but not limited to, labor, fuel, administrative costs, and maintenance.
- d. When CMAQ funds are used for operating assistance, non-Federal share requirements still apply.
- e. With the focus on start-up, and recognizing the importance of flexibility in the timing of financial assistance, the 3 years of operating assistance allowable under the CMAQ program may now be spread over a longer period, for a total of up to 5 sequential years of support. Grantees who propose to use CMAQ funding for operating support may spread the third-year amount (an amount not to exceed the greater of year 1 or 2) across an additional 2 years (i.e. years 4 and 5). This approach will provide an incremental, taper-down approach, while other funding is used for a higher proportion of the operating costs as needed. At the conclusion of the 5-year period, operating costs would have to be maintained with non-CMAQ funding. It is anticipated that this approach may enable a transition to more independent system operation. The amounts which apply to years 1 and/or 2 are established at the discretion of the State or local sponsor.

MATCHING REQUIREMENTS AND LIMITS OF FUNDING

The federal share of eligible costs is 80%. Funding used for operating assistance can generally only be used for three years but can be spread over a total of 5 sequential years (as discussed above). As required by the General Assembly, funds must be federally obligated within 24 months following selection of the project by the CTB and expended within 48 months of obligation.

SELECTION PROCESS

CMAQ allocations are distributed to MPOs. The MPOs follow program management procedures to develop a recommended list of projects for the CTB to include in the Draft SYIP.

APPLICATION PROCEDURE

MPO procedures must be followed to apply for funding under this program.

ADDITIONAL INFORMATION

Please see FHWA Interim Program Guidance Under MAP-21 (November 12, 2013) and Revised Interim Program Guidance on CMAQ Operating Assistance (July 2014) for additional information:

https://www.fhwa.dot.gov/environment/air_quality/cmaq/policy_and_guidance/2013_guidance/index.cfm

https://www.fhwa.dot.gov/environment/air_quality/cmaq/policy_and_guidance/cmaq13ig.cfm

DRPT CAPITAL ASSISTANCE

PROGRAM GOALS

The goal of the Capital Assistance program is to support public transportation capital projects necessary to maintain, improve or expand public transportation services.

ELIGIBLE RECIPIENTS AND EXPENSES

Eligible recipients include public transportation capital improvements sponsored by:

- Local and State Government
- Transportation District Commissions
- Public Service Corporations
- Federally Recognized Indian Tribes

Funds from the State Aid Capital Assistance Program may be awarded to existing and prospective new providers of public transportation service in Virginia.

Eligible capital expenses include, but are not limited to, items such as the purchase or lease of new vehicles and equipment, the rehabilitation of vehicles and equipment, the improvement or construction of transit maintenance and operations facilities, the purchase and installation of bus stop signs and shelters, the cost of debt service for major capital projects, real estate/right-of-way acquisition and safety and security equipment.

Most projects eligible for capital assistance under FTA guidelines will be eligible for state aid capital assistance. This program specifically excludes operating expenditures such as depreciation costs and preventive maintenance expenses.

MATCHING REQUIREMENTS AND LIMITS OF FUNDING

DRPT will group capital projects into one of the following tiers:

Tier 1: Expansion/Replacement/Rehabilitation of rolling stock– This is the top priority for the Commonwealth, as it rewards providers that effectively transition out vehicles once their useful life has been reached and add new vehicles to reduce congestion. This encompasses fully equipped vehicles (including fareboxes, radios, etc.). This does not include service vehicles that are used for purposes other than transporting passengers. The replacement of rolling stock request must include the vehicle that is being replaced. This includes model year, make and vehicle identification Number (VIN). Expansion vehicle request should document need including route to be served, expected additional ridership, etc.

Any items necessary for vehicles to be revenue ready on initial order are included in Tier I. System-wide replacement or upgrade of fareboxes, tablets, cameras, etc. are considered under Tier III.

Tier 2: New/replacement facilities, new service or service expansions – The second tier allows for the replacement or modification of facilities and the addition or expansion of services.

Tier 3: Other projects – The third tier comprises all other activities based on the Commonwealth's transportation goals and objectives. Examples include software and hardware as well as support vehicles.

State funding will be applied as a percentage of total cost, based on the Tier to which the capital project is assigned. The percentage is determined by the amount of available funding and the approved capital projects to which this funding must be applied. Grant recipients are required to provide at least 4% of the total cost of the capital project. For more detail about the tiers and the levels of funding available, see DRPT website.

To ensure equitable funding with limited resources, DRPT will fund only as follows:

1. **Alternative Fuel Vehicles.** Generally, DRPT will participate in the funding of an approved request for rolling stock up to the market price of a standard clean diesel vehicle. Additional costs must be borne by the locality. However, DRPT will consider requests for alternative fuel vehicles, based on several factors: local or federal funding being leveraged; inclusion of alternative fuel vehicles in the Transportation Development Plan (TDP) or other plans; local funding for infrastructure alterations; or the clear intention of migrating a significant portion of the fleet to alternative fuels.
2. **Trolley packages.** If a locality chooses to procure trolleys, DRPT will participate in the funding of the vehicle up to the market price of a standard clean diesel vehicle. This is assuming that DRPT approves the application for a vehicle purchase. Additional costs must be borne by the locality.
3. **LEED Silver.** DRPT will not fund infrastructure above the LEED Silver certification. If DRPT approves the facility and the recipient wishes to seek above the LEED certification, DRPT will only participate in the items that will achieve LEED Silver. Additional costs must be borne by the locality.

SELECTION PROCESS

Applications for Capital Assistance will be evaluated by DRPT using the following criteria:

- **Project Justification** – explanation of the need/problem that the project will address for all capital replacement requests must include the age of the capital equipment to be replaced
- **Planning** – documentation that sufficient planning has been conducted to execute the project
- **Project Scope** – approach to addressing the need/problem
- **Project Readiness** - ability to initiate and advance the project within the fiscal year the funds are applied for. Detailed milestones dates must be included in the request and the useful life of the capital that is being requested. For FTA minimum useful life standards, see the circular here
- **Technical Capacity** – identification of project management team and ability to execute the project
- **Project Budget** – ability to execute the project scope within the project budget. Provide documentation on the cost of the capital (draft quote from a vendor copy of a state contract)
- **Project Schedule** - ability to execute the project scope within the project schedule
- **Monitoring and Evaluation Plan** - applicant's approach to measuring performance and evaluating the results of the requested capital project(s)

In addition to the criteria above, various tools will be used by DRPT staff to evaluate certain types of projects:

Replacement/Rehabilitation of Existing Equipment – Projects will be evaluated against consistency with the DRPT Transit Asset Management System (TransAM) and consistency with the capital budgeting information submitted every year by applicants to develop the Six Year Improvement Program. If requesting a replacement of an item that has not met its useful life, based on the data included in the asset management system at DRPT, additional justification for the replacement will be required.

Capital Infrastructure Projects - DRPT provides funding for capital infrastructure projects including, new/renovation of facilities, fixed guideway, etc. Many of these projects receive funding from various sources in order for a project to progress to completion.

For new large capital infrastructure projects, funding may be requested for preliminary design/feasibility (up to 30% plans) to determine project feasibility and develop engineering level cost estimates. Once a project has progressed to 30% plans, the applicant must provide a comprehensive financial plan for the project. The financial plan will include the total estimated cost of the project, the total amount of state capital funds needed (by fiscal year), and other planned/committed sources of funding. It is DRPT's intent to put capital infrastructure projects under multi-year agreements at the time that the project is approved for funding. This approach is intended to provide a level of certainty for both the applicant and DRPT about the financial viability and commitment associated with the project.

DRPT makes recommendations to the CTB for inclusion in the Draft SYIP. The CTB approves the release of the draft SYIP to the public for comment in April and following receipt of public comments, the CTB approves the final SYIP in June.

APPLICATION PROCEDURE

DRPT has an annual application cycle that includes an announcement in late November that grant applications are being accepted. The grant application deadline is February 1st (or the first business day of the month). Applications are submitted using DRPT's On-Line Grant Application System at <https://olga.drpt.virginia.gov>.

ADDITIONAL INFORMATION

Please see DRPT's Grant Program Application Guidance for additional information:

<https://olga.drpt.virginia.gov/Documents/forms/FY%202019%20DRPT%20Grant%20Application%20Guidance.pdf>

PROGRAM GOALS

The goal of the State Aid Operating Assistance program is to provide support for eligible public transportation operating costs borne by eligible recipients.

ELIGIBLE RECIPIENTS AND EXPENSES

State operating assistance is awarded to existing providers of public transportation service in Virginia. Eligible grant recipients include public transportation services operated by:

- Local and State Governments
- Transportation District Commissions
- Public Service Corporations

The first \$160 million of revenues available for operating is allocated based on the service provider's total operating expenses incurred during the most recently completed fiscal year. Prospective applicants are required to submit audited financial statements to support all operating expenses. The following eligible expenses may be submitted:

- **Public transportation general administrative expenses borne by the locality.**

Eligible expenses include, but are not limited to:

- Accounting and payroll
- Advertising and promotion media
- Business related education and training for transit employees
- Business related travel expenses of transit employees
- Clerical
- Communication services – cost of communications including phones, fax, postage, etc.
- Contract management fees
- Facilities and equipment lease, rental and maintenance contracts (note: not eligible if funded through a capital grant)
- Data processing supplies
- Indirect costs – these costs can only be included if the indirect cost plans have been pre-approved by DRPT. If applicants do not have a pre-approved plan and wish to submit one to DRPT, it should be done as soon as possible. DRPT may not be able to pre-approve a plan that is submitted during the application period (December 1 – February 1). Indirect costs funded through a capital grant are not eligible.
- Insurance and bonding – cost of insurance, or payments to a self-insurance reserve, on property or against specific or general liabilities of the transit entity
- Office supplies, materials and equipment
- Other fixed charges – dues and subscriptions, taxes, licenses, etc.
- Printing and reproduction
- Professional services – retainer fees and expenses paid to professionals, not employees of the specific transit entity for their special expertise. Includes accounting, legal, architectural, engineering, management, and marketing services.
- Public Transportation Association dues (excluding any portion of the dues that are for state lobbying activities)
- Uniforms
- Utilities – heat, lights, power, water and sewer expenses

- **Public transportation expenses borne by the locality for fuels, lubricants, tires, maintenance parts and supplies.**

Eligible expenses include, but are not limited to:

- Preventative maintenance
- Cleaning supplies
- Maintenance parts, supplies, tools and equipment
- *Vehicle supplies and materials (tangible maintenance and operating resources for use and preservation of motor vehicles, not included in capital costs)
- *Motor fuels and materials
- *Oil
- *Tires and Tubes
- *Parts
- * Note: Items eligible only if consumed. Items purchased for inventory are not eligible.

In order to determine eligibility for funding, DRPT requires the provider to submit all operating revenues along with their application, which includes farebox revenue and Federal, State and Local revenues. Federal revenues are defined as financial assistance from any federal government program that supports the operation of public transportation. State revenues are financial assistance from any state government program other than DRPT's Operating Assistance program. Local revenues are defined as financial assistance from non-taxpayer entities that support the operation of the transit system. Local revenues include, but are not limited to:

- Tax levies — Specified amount from local levies that is dedicated to supporting public transit system operating costs.
- General funds — Transfers from the general fund of local governments to cover the Local Share portion of the transit system budget.
- Donations — Donations from individuals or organizations to help cover the costs of providing transit service but which are not related to specific passengers or trips.
- Advertising revenues from non-taxpayer entities
- Contract revenue from non-taxpayer entities.

MATCHING REQUIREMENTS AND LIMITS OF FUNDING

The 2013 General Assembly passed Senate Bill 1140, which requires the CTB to allocate revenues generated for the Commonwealth Mass Transit Fund for 2014 and succeeding years. A performance-based funding model was implemented for revenues generated above \$160 million. Funding will be based on a three-year rolling average of performance data submitted to DRPT by all eligible recipients. The performance metrics and percent of available funding are defined as:

- **Net Cost per Passenger (50%):** Total operating costs less depreciation related to transit assets and any operating income derived from a source other than taxpayers divided by ridership. (An example of a non-operating income item would be interest income.)
- **Customers per Revenue Hour (25%):** Ridership divided by revenue hours.
- **Customers per Revenue Mile (25%):** Ridership divided by revenue miles.
- **Transit System Sizing:** Systems will be sized equally based on ridership and operating costs and relative to all transit operators eligible for state assistance.

Based on the most recent annual ridership and most recent audited operating cost available net of depreciation, projects funded in other DRPT programs, and non-transit related expenses.

Further details on Transit Service Delivery Advisory Committee (TSDAC) performance-based operating assistance allocation model can be found in the Report on Performance-Based operating Assistance Allocation Methodology, which was adopted by the CTB on October 11, 2013.

Historically, the Operating Assistance Program has provided approximately 20 percent of reimbursable operating expenses. The amount of funding available for this program has never been sufficient for DRPT to provide a consistent amount of state participation.

SELECTION PROCESS

DRPT evaluates Operating Assistance applications by validating the expenses and revenue sources submitted on the application, determining the eligibility of listed expenses based upon the criteria noted above, requesting additional data or clarification from applicants if necessary. The finance staff at DRPT is responsible for validation and begins the process in the fall prior to the application opening date. The validation process includes reviewing data submitted by the applicant for the previous year and verifying against the applicant's audited financial statements.

Operating Assistance is available for new systems, new modes of public transportation being added by existing systems and new service on current modes of public transportation provided by existing systems. New service on current modes must increase existing transit service revenue miles/hours by **at least 5 percent** to be eligible for additional operating assistance funding.

Any proposal to develop a new transit system, new mode or new service must begin with proper planning. To assist local entities and the public, DRPT has developed Transit Service Design Guidelines as a tool to assist with the planning process. This tool provides useful information to local entities on implementing new transit service. Local entities must conduct a plan prior to requesting any Operating Assistance for new transit service (this does not include expanding existing routes). Planning funds may be applied for through DRPT's Technical Assistance Program. DRPT encourages local entities to involve DRPT in any transit system planning efforts. DRPT also has resources available to help manage transit system planning studies on behalf of local entities.

Transit feasibility studies are acceptable planning documents for new transit systems. Existing systems must have a completed and adopted Transit Development Plan in order to request Operating Assistance for new service. DRPT's Transit Development Plan requirements are available in OLGA. Transit Development Plans must be submitted with an existing system's Operating Assistance application.

DRPT staff will evaluate all requests for new service using the Transit Service Design Guidelines. Specifically, proposals should demonstrate how they have addressed the topics defined in Sections 1.2-1.7 of the guidelines:

- Examining all of the options
- Planning for success
- Framing the purpose and need
- Land use considerations
- Service area and transit network design

- Other important considerations

Following the evaluation, DRPT makes recommendations to the CTB for inclusion in the Draft SYIP. The CTB approves the release of the draft SYIP to the public for comment in April and following receipt of public comments, the CTB approves the final SYIP in June.

APPLICATION PROCEDURE

DRPT has an annual application cycle that includes an announcement in late November that grant applications are being accepted. The grant application deadline is February 1st (or the first business day of the month). Applications are submitted using DRPT's On-Line Grant Application System at <https://olga.drpt.virginia.gov>.

ADDITIONAL INFORMATION

Please see DRPT's Grant Program Application Guidance for additional information:

[https://olga.drpt.virginia.gov/Documents/forms/FY%202019%20DRPT%20Grant%20App
lication%20Guidance.pdf](https://olga.drpt.virginia.gov/Documents/forms/FY%202019%20DRPT%20Grant%20Application%20Guidance.pdf)

PROGRAM GOALS

The underlying goal of the program is to incentivize calculated risk taking by focusing on innovative and non-traditional transportation solutions that can directly or indirectly improve public transportation in the Commonwealth. This program is designed to fill the funding gap for projects and activities that may not necessarily be directly suited for other State and Federal formula-based capital and operating grant programs.

The program seeks to fund innovative and non-traditional projects and activities to:

- Improve the efficiency of public transportation providers in all functional areas.
- Offer creative approaches to identify and penetrate travel markets for public transportation systems.
- Increase private sector involvement in all areas of public transportation.
- Raise the utilization and productivity of existing public transportation services.
- Improve public transportation services for people with disabilities.

ELIGIBLE RECIPIENTS AND EXPENSES

Eligible recipients include local governing bodies, planning district commissions, metropolitan or transportation planning organizations, or transit agencies that receive state operating assistance from the Mass Transit Trust Fund, as established in § 58.1-638(A)(4)(b)(2) of the Code of Virginia.

Private corporations and Transportation Management Associations (TMA's) may participate in projects through contractual arrangements with eligible recipients. Funds may be passed through to the regional and community level in the form of grants or used by DRPT directly.

Eligible projects and activities include research, development, demonstration and deployment of innovative and non-traditional projects, and evaluation of new technology. As the name suggests, the purpose of the program is to allow demonstration of activities to build support for long-term solutions. For traditional transit services seeking operating assistance, eligible projects will only include new non-traditional service types and services in jurisdictions with no established transit systems.

Capital rolling stock costs are only funded in extraordinary circumstances. Leasing of rolling stock is recommended for Demonstration Projects. The total project costs net of any federal aid received are eligible for reimbursement by grant funds

MATCHING REQUIREMENTS AND LIMITS OF FUNDING

The Demonstration Project Assistance Program provides up to 80% of approved expenses, dependent on the number of applications approved in the grant application cycle and the amount of funding available for the Demonstration Project Assistance Program. The rest of net project costs must be supplied using local funding sources.

Revenues generated by any approved Demonstration Project will be offset against expenses to derive the net project cost. Only the net project cost is eligible for reimbursement by grant funds. The following non-exhaustive list illustrates types of eligible expenses.

- Administrative costs (research, before-and-after analysis, personnel, office supplies, travel, advertising, etc.)
- Operating costs (wages, supplies, maintenance, purchased services, etc.)

- Capital costs (facilities and equipment)

Approved projects may begin on the first day of the fiscal year (July 1). Demonstration projects should be designed to conclude approximately within one year of the initiation of service. Under justifiable circumstances, funding for demonstration projects can be provided for up to three years.

SELECTION PROCESS

Grant applications will be reviewed against the goals of the program, based on the level of planning and project readiness, local and regional support, financial commitment, and project's applicability for other similar entities. Traditional transit services that can be funded with traditional formula based state and federal programs are not considered suitable for this program.

Following the evaluation, DRPT makes recommendations to the CTB for inclusion in the Draft SYIP. The CTB approves the release of the draft SYIP to the public for comment in April and following receipt of public comments, the CTB approves the final SYIP in June.

APPLICATION PROCEDURE

DRPT has an annual application cycle that includes an announcement in late November that grant applications are being accepted. The grant application deadline is February 1st (or the first business day of the month). Applications are submitted using DRPT's On-Line Grant Application System at <https://olga.drpt.virginia.gov>.

ADDITIONAL INFORMATION

Please see DRPT's Grant Program Application Guidance for additional information:

[https://olga.drpt.virginia.gov/Documents/forms/FY%202019%20DRPT%20Grant%20App
lication%20Guidance.pdf](https://olga.drpt.virginia.gov/Documents/forms/FY%202019%20DRPT%20Grant%20Application%20Guidance.pdf)

DRPT TECHNICAL ASSISTANCE PROGRAM

PROGRAM GOALS

The goal of the Technical Assistance program is to help improve public transportation or transportation demand management services. It can be used to conduct a wide range of planning and technical analysis that is needed as input into a decision making or evaluation process.

ELIGIBLE RECIPIENTS AND EXPENSES

Eligible recipients include:

- Local and State Government
- Transportation District Commissions
- Public Service Corporations
- Planning District Commissions
- Human Service Agencies Involved in Rural Public Transportation
- TDM/Commuter Assistance Agencies

Eligible expenses include the cost of preparing technical studies including the following:

- Capital and/or Operating Financial Plans
- Comprehensive Operations Analysis
- Equipment Purchases as appropriate
- First mile/Last mile Feasibility Studies (including bike share)
- Industry Peer Reviews
- ITS/APTS Feasibility Studies
- Management and Performance Evaluations
- Marketing and Promotional Plans
- Procurement Assistance
- Project Development
- Public Transportation or Commuter Assistance Related Services
- Strategic Plans
- Technology Research and Plans
- Transit Development Plans
- Transportation Demand Management Bikeshare Programs – Startup Only
- Transportation Demand Management Plans
- Transportation Demand Management Program Feasibility Studies
- Transportation Demand Management Research and Evaluation Studies
- Transit Feasibility Study
- Vanpool Program Feasibility Studies

MATCHING REQUIREMENTS AND LIMITS OF FUNDING

Technical Assistance projects are typically funded at the maximum state match ratio of 50%. The funding for this program comes from the Special Projects fund, which includes funding for DRPT's Transportation Management Project Assistance, Demonstration Assistance, Technical Assistance and Intern programs. The amount of funding spent from the Special Projects fund for each one of these programs varies each year depending upon needs; however, the total amount of funding for these programs is generally in the range of \$2 million annually.

SELECTION PROCESS

Technical Assistance applications are evaluated by DRPT using the following criteria:

- Project Justification – explanation of the need/problem that the project will address
- Planning – documentation that sufficient planning has been conducted to execute the project (not necessary if the application is for conducting a plan)
- Project Scope – approach to addressing the need/problem
- Project Readiness – ability to initiate and substantially complete the project within the fiscal year the funds are being applied for
- Technical Capacity – identification of project management team and ability to execute the project
- Project Budget – ability to execute the project scope within the proposed project budget
- Project Schedule – ability to execute the project scope within the project schedule
- Monitoring and Evaluation Plan – approach to measuring performance and evaluating the results of the project

To assist local entities with planning for new transit systems or new service for existing systems, DRPT has developed Transit Service Design Guidelines. These guidelines provide useful information that can be used as a first step in the planning process. DRPT encourages local entities to involve DRPT in any transit system planning efforts. DRPT also has staff and consultant resources available to help manage transit system planning studies on behalf of local entities.

Following the evaluation, DRPT makes recommendations to the CTB for inclusion in the Draft SYIP. The CTB approves the release of the draft SYIP to the public for comment in April and following receipt of public comments, the CTB approves the final SYIP in June.

APPLICATION PROCEDURE

DRPT has an annual application cycle that includes an announcement in late November that grant applications are being accepted. The grant application deadline is February 1st (or the first business day of the month). Applications are submitted using DRPT's On-Line Grant Application System at <https://olga.drpt.virginia.gov>.

ADDITIONAL INFORMATION

Please see DRPT's Grant Program Application Guidance for additional information:

<https://olga.drpt.virginia.gov/Documents/forms/FY%202019%20DRPT%20Grant%20Application%20Guidance.pdf>

PROGRAM GOALS

The purpose of the TDM Operating Assistance program is to provide support for eligible TDM program operating costs borne by eligible recipients. The primary goal of these programs is to reduce or shift traffic congestion, improve air quality, and improve mobility options by facilitating commuter mobility in high occupancy transportation modes.

ELIGIBLE RECIPIENTS AND EXPENSES

State operating assistance is awarded to existing providers of TDM programs in Virginia. Applicants seeking to establish a new TDM program should apply under the Transportation Management Project Assistance program. Eligible grant recipients include TDM programs and services operated by:

- Local and State Governments
- Transportation Management Associations
- Planning District Commissions
- Transportation District Commissions
- Transit Operators

It is not possible to list every eligible or ineligible expense. Therefore, it is incumbent upon the grant applicant to check with their DRPT Project Manager to determine if an expense is eligible prior to incurring that expense. As a rule, all expenses should be necessary to the overall operation of the FY 2019 Annual Work Plan and be both reasonable in their nature and amount. The following eligible expenses are provided as guidance:

- Advertising, marketing and promotion media (marketing should not be primarily transit, it must include other congestion mitigation modes, such as, carpool, vanpool, telework)
- Business related travel expenses of project staff
- Communication services – cost of communications including phones, fax, postage, etc.
- Employer Outreach and telework assistance
- Evaluation of TDM program or components of the program
- Facilities and equipment lease, rental and maintenance contracts (note: not eligible if funded through a capital grant)
- Guaranteed/Emergency Ride Home program operations
- Indirect costs – these costs can only be included if the indirect cost plans have been pre-approved by DRPT. If applicants do not have a pre-approved plan and wish to submit one to DRPT, it should be done as soon as possible. DRPT may not be able to pre-approve a plan that is submitted during the application period (December 1 – February 1). Indirect costs funded through a capital grant are not eligible.
- Incentives to try carpooling or transit
- Insurance and bonding – cost of insurance, or payments to a self-insurance reserve, on property or against specific or general liabilities of the transit entity
- Office supplies, materials and equipment
- Printing and reproduction of TDM promotional and marketing materials (printing and reproduction of bus and transit schedules are NOT eligible).
- Professional services – fees and expenses paid to professionals (contractors or consultants). Includes employer outreach, vanpool formation, telework technical assistance and marketing services.
- Promotional items with a value of \$5 or less

- Ridematching system and services fees
- Salaries, wages and fringe benefits of project employees
- Training and education related to the implementation of a TDM program for TDM program employees
- Transportation association dues (excluding any portion of the dues that are for state lobbying activities)
- Uniforms – only if used for transportation fairs and promotional events
- Utilities – heat, lights, power, water and sewer expenses

MATCHING REQUIREMENTS AND LIMITS OF FUNDING

TDM Operating Assistance programs and projects are funded at the maximum state ratio of 80% of eligible expenses with 20% in cash (in-kind is not allowable) local match. Funding for TDM Operating Assistance comes from the Special Projects fund, which includes funding for DRPT's Transportation Management Project Assistance, Demonstration Assistance, Technical Assistance and Intern programs.

SELECTION PROCESS

DRPT evaluates applications based on if the program or project is a smart investment for the Commonwealth. DRPT will consider if the need is justified, how well the project will address the need, if there are clear and reasonable goals, if there is a good evaluation plan with performance measurements, the applicant's readiness and technical expertise, and if the project is in alignment with the applicant's TDM Plan. Also, DRPT will review the application by validating the expenses and revenue sources submitted on the application, determining the eligibility of listed expenses based upon the criteria noted above, requesting additional data or clarification from applicants if necessary, and reviewing data submitted by the applicant for the previous year and any audited financial statements. DRPT's evaluation includes a review of the submitted Annual Work Plan.

Once the data is reviewed and validated, DRPT reviews applications using the following criteria:

- Program Description/Scope – approach to implementing the annual work program. Measurable outputs, time limited and measurable outcomes, and impacts must be established in scope.
- Program Justification – is the need identified and justified
- Technical Capacity – identification of program management team and ability to execute the program
- Program Budget – ability to execute the scope within the proposed program budget; is the budget right for the program size and scope
- Program Schedule – ability to execute the scope within the program schedule
- Monitoring and Evaluation Plan – detail the approach and methodology for tracking outputs and realizing outcomes and impacts established in scope and evaluation approach to determining if the program is successful.
- Detailed description of TDM program, expenses and need from the Annual Work Plan that must be submitted with the application
- Relationship of application scope and Annual Work Plan to Six Year TDM Plan
- Cost effectiveness – achieving the maximum benefits

Following the evaluation, DRPT makes recommendations to the CTB for inclusion in the Draft SYIP. The CTB approves the release of the draft SYIP to the public for comment in April and following receipt of public comments, the CTB approves the final SYIP in June.

APPLICATION PROCEDURE

DRPT has an annual application cycle that includes an announcement in late November that grant applications are being accepted. The grant application deadline is February 1st (or the first business day of the month). Applications are submitted using DRPT's On-Line Grant Application System at <https://olga.drpt.virginia.gov>.

ADDITIONAL INFORMATION

Please see DRPT's Grant Program Application Guidance for additional information:

<https://olga.drpt.virginia.gov/Documents/forms/FY%202019%20DRPT%20Grant%20Application%20Guidance.pdf>

DRPT TRANSPORTATION MANAGEMENT PROJECT ASSISTANCE

PROGRAM GOALS

The purpose of the TMP Assistance program is to provide support for new, pilot and innovative Transportation Demand Management (TDM) services that reduce demand for single occupancy vehicles, move more people through congested corridors, increase vehicle occupancy and reduce peak time auto trips. Projects can be statewide, regional and local initiatives. TMP Assistance projects are generally not part of the regular operation of a TDM program. The TMP Assistance program may be used to pilot new TDM strategies with a defined start and end date. TMP Assistance projects must be part of a TDM Plan.

ELIGIBLE RECIPIENTS AND EXPENSES

Eligible grant recipients include the following transportation agencies:

- Local and State Governments
- Transportation Management Associations
- Planning District Commissions
- Transportation District Commissions
- Transit Operators
- Private operators of TDM services may be eligible on a case by case basis

Eligible projects that reduce single occupant vehicle travel, reduce peak time auto trips, or provide commute options including the following:

- Vanpool!VA vanpool formation, assistance and promotional programs (VanStart, VanSave, vanpool “try-it” incentives, monthly stipend for vanpool data)
- Employer Outreach programs
- Transit incentive programs
- Try Transit Week promotion
- Telework!VA Telework Week promotion
- Telework!VA telework outreach programs
- Bike to Work Week promotion
- School Pool programs
- Special marketing campaigns
- Carpool incentive programs
- Residential outreach programs

MATCHING REQUIREMENTS AND LIMITS OF FUNDING

Transportation Management Project Assistance projects are funded at the maximum state ratio of 80% of eligible expenses with 20% in cash (in-kind is not allowable) local match. Funding for Transportation Management Project Assistance comes from the Special Projects fund, which includes funding for DRPT’s TDM Operating Assistance, Demonstration Assistance, Technical Assistance and Intern programs.

SELECTION PROCESS

DRPT evaluates applications based on if the program or project is a smart investment for the Commonwealth. DRPT will consider if the need is justified, how well the project will address the need, if there are clear and reasonable goals, if there is a good evaluation plan with performance measurements, the applicant’s readiness and technical expertise, and if the project is in alignment with the applicant’s TDM Plan. Also, DRPT will review the application by validating the expenses and revenue sources submitted on the application, determining the eligibility of listed expenses based upon the criteria noted above,

requesting additional data or clarification from applicants if necessary, and reviewing data submitted by the applicant for the previous year and any audited financial statements. If the application is for a second round of funding for a project, DRPT will evaluate the project to determine if it met the stated goals and if it is a good investment for the Commonwealth before DRPT will approve additional funding. DRPT's evaluation includes a review of the submitted Annual Work Plan and Six Year TDM Plan.

Once the data is reviewed and validated, DRPT reviews applications using the following criteria:

- Project Description – what the project will achieve
- Project Scope – a detailed scope of how the project will be implemented and how the funding will be used. Measurable outputs, time limited and measurable outcomes, and impacts must be established in scope.
- Project Justification – identify and justify a need or problem the project will solve
- Technical Capacity – identification of program management team and ability to execute the program
- Project Budget – ability to execute the scope within the proposed program budget; is the budget right for the program size and scope
- Project Schedule – ability to execute the scope within the program schedule
- Monitoring and Evaluation Plan – detail the approach and methodology to tracking outputs and measuring outcomes and impacts, and evaluation methodology to determine if the project is successful.
- Relationship of application scope to a TDM Plan or similar plan
- Cost effectiveness – achieving the maximum benefits

Once the data is reviewed and validated, DRPT reviews applications using the following criteria:

- Program Description/Scope – approach to implementing the annual work program. Measurable outputs, time limited and measurable outcomes, and impacts must be established in scope.
- Program Justification – is the need identified and justified
- Technical Capacity – identification of program management team and ability to execute the program
- Program Budget – ability to execute the scope within the proposed program budget; is the budget right for the program size and scope
- Program Schedule – ability to execute the scope within the program schedule
- Monitoring and Evaluation Plan – detail the approach and methodology for tracking outputs and realizing outcomes and impacts established in scope and evaluation approach to determining if the program is successful.
- Detailed description of TDM program, expenses and need from the Annual Work Plan that must be submitted with the application
- Relationship of application scope and Annual Work Plan to Six Year TDM Plan
- Cost effectiveness – achieving the maximum benefits

Following the evaluation, DRPT makes recommendations to the CTB for inclusion in the Draft SYIP. The CTB approves the release of the draft SYIP to the public for comment in April and following receipt of public comments, the CTB approves the final SYIP in June.

APPLICATION PROCEDURE

DRPT has an annual application cycle that includes an announcement in late November that grant applications are being accepted. The grant application deadline is February 1st (or the first business day of the month). Applications are submitted using DRPT's On-Line Grant Application System at <https://olga.drpt.virginia.gov>.

ADDITIONAL INFORMATION

Please see DRPT's Grant Program Application Guidance for additional information:

<https://olga.drpt.virginia.gov/Documents/forms/FY%202019%20DRPT%20Grant%20Application%20Guidance.pdf>

ATTACHMENT D: PARK AND RIDE LOTS



Richmond District Park & Ride Investment Strategy



Route 10 near I-95; Exit 61

Major Corridors Served: I-95/US 1/US 360/Route 10

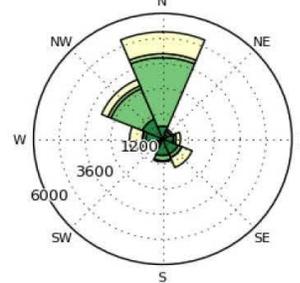
Jurisdiction: Chesterfield

Improvement Type: New Lot

Recommendation ID: RIC-23

Technical Score (Ranking): 7.889 (5th)

Commute Compass *



Land Available	District Support	Local Support	MPO Support	PDC Support
-	✓	✓	✓	-

PROJECT DESCRIPTION

Construct a new 250 space P&R lot along Route 10 (West Hundred Road) near I-95 Exit 61.

COMMUTER/ROADWAY DEMAND

ADT (Route Served): 107,761

LOS (Route Served): D

Workers within 3 mile radius: 14,180

% Workers traveling outside 3 mile radius: 93%

% Workers traveling outside 25 mile radius: 27%

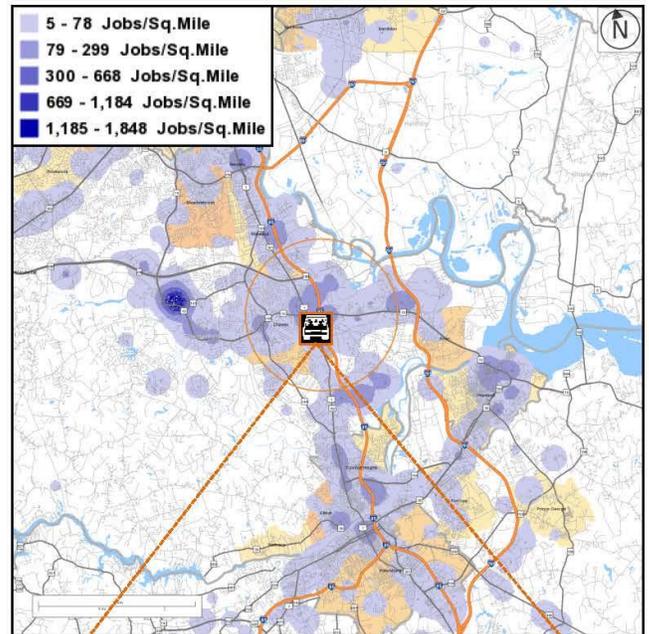
TRANSPORTATION NETWORK BENEFIT

Number of Spaces: 250

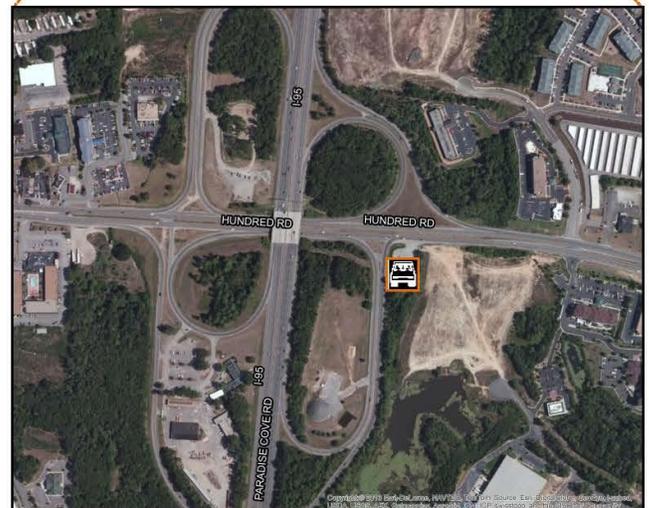
Inside Priority Investment Area: Corridor

Annual VMT Reduction: 2,151,886 miles

Total Annual Cost Savings: \$ 1,183,538



*Job Counts by Distance/Direction conducted in 2011, <http://onthemap.ces.census.gov/>



Phase	Duration (Months)	Cost Estimate
Design	-	\$ -
Right-of-Way	-	\$ -
Construction	-	\$ -
<i>Total</i>	-	\$ 2,500,000



Richmond District Park & Ride Investment Strategy



US 1/US 301 near Route 150

Major Corridors Served: I-95/US 1/US 360/Route 150

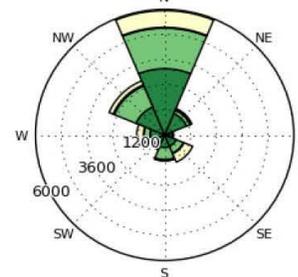
Jurisdiction: Chesterfield

Improvement Type: New Lot

Recommendation ID: RIC-15

Technical Score (Ranking): 7.622 (6th)

Commute Compass *



Land Available	District Support	Local Support	MPO Support	PDC Support
-	✓	✓	✓	-

PROJECT DESCRIPTION

Construct a new 250 space P&R lot along US 1/US 301 near Route 150 (Chippenham Parkway).

COMMUTER/ROADWAY DEMAND

ADT (Route Served): 125,379

LOS (Route Served): E

Workers within 3 mile radius: 11,439

% Workers traveling outside 3 mile radius: 96%

% Workers traveling outside 25 mile radius: 19%

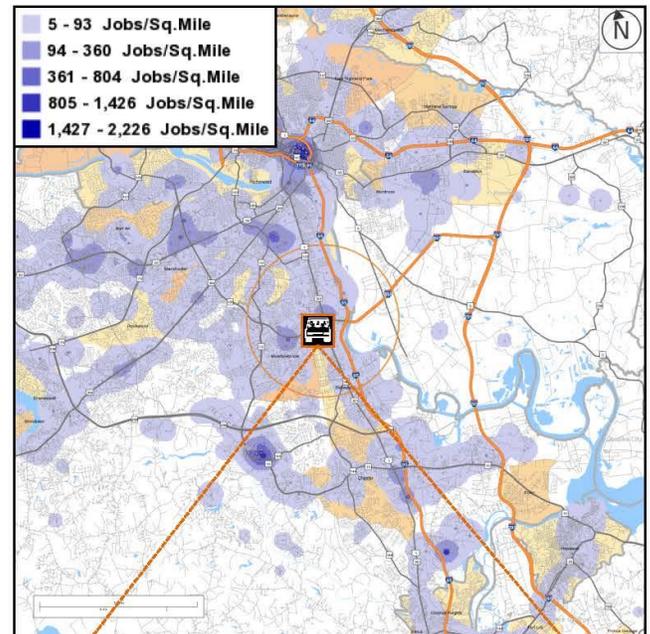
TRANSPORTATION NETWORK BENEFIT

Number of Spaces: 250

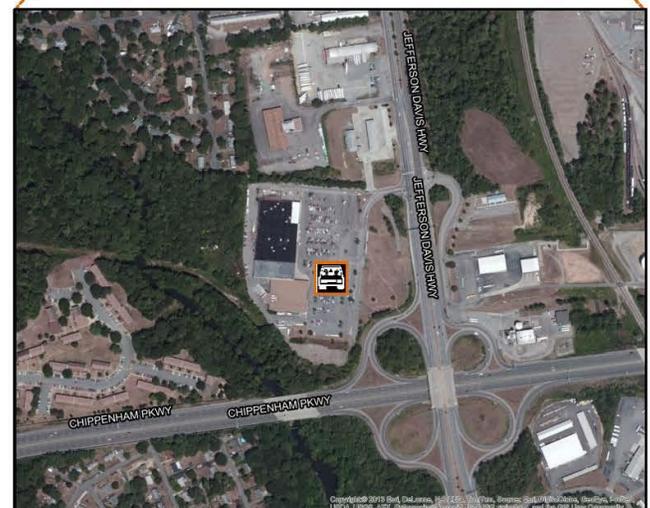
Inside Priority Investment Area: Corridor

Annual VMT Reduction: 1,705,391 miles

Total Annual Cost Savings: \$ 937,965



*Job Counts by Distance/Direction conducted in 2011, <http://onthemap.ces.census.gov/>



Phase	Duration (Months)	Cost Estimate
Design	-	\$ -
Right-of-Way	-	\$ -
Construction	-	\$ -
<i>Total</i>	-	\$ 2,500,000